C. 7310
RECEIVED
APR 16 1945
U. S. LIBRARY

MARCH 1945

UNITED STATES
DEPARTMENT OF THE INTERIOR
HAROLD L. ICKES, SECRETARY

BUREAU OF MINES
R. R. SAYERS, DIRECTOR

INFORMATION CIRCULAR

GEOPHYSICAL ABSTRACTS 119

OCTOBER - DECEMBER 1944

WITH AN INDEX TO ABSTRACTS 116-119

COMPILED BY

W. AYVAZOGLOU AND V. SKITSKY

Generated on 2024-09-19 14:46 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

I.C. 7310,
March 1945.

INFORMATION CIRCULAR

UNITED STATES DEPARTMENT OF THE INTERIOR - BUREAU OF MINES

GEOPHYSICAL ABSTRACTS 119
OCTOBER - DECEMBER 1944[1]

Compiled by W. Ayvazoglou[2] and V. Skitsky[2]

CONTENTS

	Page
1. Gravitational methods	1
2. Magnetic methods	6
3. Seismic methods	11
4. Electrical methods	19
5. Radioactive methods	24
6. Geothermal methods	27
7. Geochemical methods	28
8. Unclassified methods and topics related to geophysics	29
9. New publications	35
10. Patents	38
Index to Geophysical Abstracts 119, October-December 1944	48
Index to Geophysical Abstracts 116-119, January-December 1944	52

FOREWORD

Geophysical Abstracts 1 - 86 were issued in mimeographed form by the Bureau of Mines; Abstracts 87 - 111 were published as bulletins of the Geophysical Survey; Abstracts 112 - 118 were issued in mimeographed form by the Bureau of Mines as Information Circulars 7256, 7257, 7267, 7273, 7285, 7292, and 7303.

1. GRAVITATIONAL METHODS

7514. Barsch, O. Stellungnahme zum Bericht der Seismos G. m. b. H. über die Gravimeteruntersuchungen im Gebiet Varna (Note on the Report of Seismos, Ltd., Concerning Gravimetric Studies in the Region of Varna, Bulgaria). Jahrb. Direktion Bodenschätze in Bulgarien, pt. A, vol. 1, 1941, p. 45.

The author discusses the report of Seismos Co. on gravimetric surveys in the region of Varna, Bulgaria (Geophys. Abs. 118, No. 7516). The minimum zone of the Dobri-Dol is regarded as the deepest gravity belt between the elevations of Momino and the area of Varna, Priselci-Gor, and Bliznak; the younger rocks probably possess the greatest thickness here. The significance

1/ The Bureau of Mines will welcome reprinting of this paper, provided the following footnote acknowledgment is used: "Reprinted from Bureau of Mines Information Circular 7310".

2/ Physical science analytical editor, Bureau of Mines, U. S. Department of the Interior.

Generated on 2024-09-19 14:40 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

of the gravity break at Venelin - Aksakovo is stressed as an indication of oil. Further gravimetric studies in Bulgaria are recommended, and a progra for them is offered. - V. S.

7645. Bullard, E. C. The Earth's Gravitational Field. Endeavour, London, vol. 2, No. 7, 1943, pp. 105-108.

The nature of the force of gravity, its variations, and the methods of measurement are discussed briefly. Studies of gravity provide information about the distribution of heavy and light rocks and explain various geological processes, such as mountain building. These studies have led to a remarkable development of gravitational measurements on the ground and at sea. As a result, the earth's gravitational field has been widely explored, but it is still not fully known. Isostasy seems to furnish an explanation of the known facts. During the last 10 years a tendency has been developing toward a closer connection between these geophysical studies and traditiona geology. - V. S.

7646. Chella, Morio, and Solaini, Luigi. Apparato per la registrazione fotografica nelle misure pendolari di gravità (An Apparatus for the Photographic Registration of Pendulum Measurements of Gravity). Ric. Sci. Progr. Tecn., Rome, vol. 13, 1942, pp. 683-697.

Describes a photographic recorder of pendular measurements of gravity. A lamp directs three beams to three mirrors fastened, respectively, on a vibrator making 120 oscillations per second, a receiver of hourly signals, and a pendular system. The beams reflected from the mirrors fall on a phot graphic ribbon moving at a rate of 6 or 12 cm. per second. A photographic record is made of these beams at the beginning and at the end of each hourl signal, which lasts 5 minutes. From these records is calculated the numbe of oscillations occuring during a definite period of time, such as 2 hours. The accuracy of measurements has been tested at Milan and Pisa. The data a presented. They show that the oscillator has a precision of the order of about a thousandth of a sec.; the pendulum oscillations can be computed fr the records with an average error of $\pm 4 \times 10^{-4}$ sec. - V. S.

7647. Goudey, Raoul. Mesures de l'intensité de la pesanteur dans le sud ouest de la France pendant l'année 1941, effectuées en mars-août 1941 (Measurements of the Intensity of Gravity in Southwest France During the Year 1941, Carried Out in March-August 1941). Compt. rend. Acad. Sci., Paris, vol. 215, 1942, pp. 298-299, 342-344.

Gravity measurements were made in the southwest of France during 1941 Two Holweck-Lejay pendulum instruments were used. Toulouse served as base station, with $g = 980.437$ cm./sec.^{2} The calculation of the Bouguer correc tion was based on the international formula for a uniform density of 2.67. The altitude of stations was determined barometrically, with a possible error of 5 meters. The data are tabulated. - V. S.

Generated on 2024-09-19 14:39 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7648. Govorova, L. A., and Tovchigrechko, S. S. An Experiment in Rapid Determination of Gravity (in Russian). Tsentral'nyi Nauchno-Issledovatel'skii Institut Geodezii, Aeros'emki i Kartografii GUGK pri SNK SSSR, Sbornik 7, Issledovaniia po Gravimetrii, Moscow, 1941, pp. 29-48.

Gravimeters with shorter operating times tend to supplant the pendulum for gravity determinations, but the latter preserves its importance in measurements of great precision. The present paper describes field tests of the method of L. V. Sorokin for shortening the time of pendulum observations. In this method the signals from pendulum gravimeters used in field observations are checked not against the readings of the usual portable contact chronometer but against the direct time signals received with a resonance apparatus from the main pendulum of the astronomical clock of the nearest first-class observatory. In the described tests, the time service at the Pulkovo observatory has relayed the signals from a set of several intercompared clocks, through a specially constructed apparatus. The precision of time determinations was of the order of ± 0.002 second. The paper describes the instrumental arrangements, the field observations, and the results. The tests have proved that the method of Sorokin gives a precision equal to that of the usual procedure but requires less time. - V. S.

7649. Haalck, H. Die örtliche Verteilung der ersten drei vertikalen Differentialquotienten W_z, W_{zz}, und W_{zzz} des Schwerepotentials in dem Messgebiet von Heide in Holstein (The Local Distribution of the First Three Vertical Differential Quotients W_z, W_{zz}, and W_{zzz} of the Gravity Potential in the Heide Survey District, Holstein). Beitr. ang. Geophys., Leipzig, vol. 10, 1943, pp. 121-129.

The variation with depth of the gravity acceleration and of its first two derivatives was determined in the Heide survey district, Holstein. The results were indicated on a map of isanomalies. A comparison was then made between this method of representation and the usual mapping of gradients and curvatures derived from torsion-balance measurements. It was found that the first representation is more helpful for interpretation than gradients and curvatures. In all, the gravity acceleration and its derivatives explore the same structures. But the acceleration characterizes more particularly the deeper layers; the first derivative, the intermediate layers; and the second derivative, the superficial layers. - V. S.

7650. Hersey, J. B. Gravity Investigation of Central-Eastern Pennsylvania. Bull. Geol. Soc. America, Baltimore, Md., vol. 55, No. 4, 1944, pp. 417-444.

In 1940 and 1941, 712 gravity stations were established in central-eastern Pennsylvania over a region centering about Allentown and Bethlehem. Geologically the area extends from the Triassic lowlands to the Silurian of Kittatinny Mountain. Bouguer anomalies were computed, and from them gravity contour maps were made of the whole area and certain localities in it. Anomaly variation over the area is found to be both regional and local, the local

Generated on 2024-09-19 14:49 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

anomalies correlating in shape with structural trends and in several cases coinciding geographically with outcropping density contrasts that reasonably account for the gravity anomaly. Rough analysis is made of some of the structures, indicating the possible shape and size of mass anomalies that could produce the gravity anomalies found. Considerable overlapping of local effects makes detailed analysis difficult, but it is believed that the continued use of the gravimetric method in this region will be useful in studying its geologic and structural problems. - Author's abs.

7651. Horton, C. W. Gravity Anomalies Due to Extensive Sedimentary Beds. Bull. Geol. Soc. America, Baltimore, Md., vol. 55, No. 10, 1944, pp. 1217-1228.

Isostatic anomalies result from various two-dimensional structures such as large sedimentary basins and geosynclines. It is shown that a basin should be surrounded by a "halo" of positive anomalies and that the areal extent of the sedimentary layers and the dip of the lower contact are more important than thickness in producing the isostatic anomaly. The computations are applied to a coastal plain to interpret Vening Meinesz' findings that on many offshore profiles the anomaly increases algebraically away from the coast. Considerable computations are necessary before one can determine the amount of time lag between the deposition of sediments and the attainment of complete isostatic compensation. - Author's abs.

7652. Jung, Karl. Die Schwerewirkung von Störungsmassen und ihre Veranschaulichung auf der Einheitskugel (The Gravity Effect of Disturbing Masses and Its Demonstration on a Unit Sphere). Ztschr. Geophys., Braunschweig, vol. 17, 1942, pp. 276-278.

The derivation of formulas for the gravity effect of flat, horizontal layers is clarified by the application of a simple method which makes use of a unit sphere and does not require much mathematical knowledge. - V. S.

7653. Malamphy, M. C., and Vallely, J. L. Geophysical Survey of the Arkansas Bauxite Region. Geophysics, Menasha, Wis., vol. 9, No. 3, 1944, pp. 324-366.

Magnetic and gravimetric surveys were conducted by the Bureau of Mines over an area of approximately 1,400 square miles in the bauxite district of central Arkansas. The primary purpose of these surveys was to discover any possible buried and hitherto unknown syenite masses favorable for the occurrence of bauxite and to determine the approximate position of the buried flanks of the known syenite masses that might offer conditions favorable for the discovery of new ore bodies. These surveys indicated that the various syenite outcrops are domes or bosses on a large batholith and that other similar domes occur on the batholith but do not outcrop. Drilling on the local geophysical anomalies proved the presence of 10 buried domes, but only 2 were found to project above the upper surface of the Midway clays, a

Generated on 2024-09-19 14:39 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

requisite of conditions favorable for the occurrence of bauxite ore bodies. The geophysical data indicated the approximate configuration of the buried flanks of the known syenite outcrops, and the portions of these flanks that project above the Midway have now been outlined more accurately by drilling. The geophysical surveys have produced evidence permitting the elimination of a large area as unfavorable for the occurrence of bauxite.

Magnetic surveys extending along the Midway-Wilcox contact from Gurdon in Clark County on the southwest to Searcy in White County on the northeast have proved the improbability of the existence of other syenite masses similar to those found in Pulaski and Saline Counties. A detailed magnetic survey of the Magnet Cove area in Hot Spring County has proved that the syenite mass exposed in that locality is an isolated intrusion and entirely unrelated to those of Pulaski and Saline Counties. This syenite mass does not occur under conditions believed to be favorable for the occurrence of bauxite. - Authors' abs.

7634. Niemczyk, Oskar, Ed. Spalten auf Island (Fissures in Iceland). Verlag von Konrad Wittwer, Stuttgart, 1943, 180 pp. Price, 16.50 RM.

In 1938 a German expedition explored the fissures of Iceland. Geodetic, geological, and gravimetric methods were applied. The gravimetric work was intended to initiate an investigation of the subsurface. Eight basic stations were established with a four-pendulum apparatus by E. Ansel. Secondary stations were covered with the Thyssen gravimeter; the measurements made at 40 stations by A. Schleusener of the Seismos Co. had an average error of ± 0.29 mgl. The gravity anomalies, obtained after making the Free-Air and Bouguer reductions, are discussed in the light of the international gravity formula of 1930. Further gravimetric surveying in Iceland is recommended. - V. S.

7635. Peacock, H. B. The Geophysical History of the Cayuga Field, Anderson County, Tex. Geophysics, Menasha, Wis., vol. 9, No. 3, 1944, pp. 299-313.

Original seismic maps based on the correlation method of reflection shooting are presented, together with a geological structure map. Cross sections show a comparison of the seismic with the well data. Results of a gravity-meter survey are also shown. - Author's abs.

7636. Scheffer, V. Sull' impiego dei gravimetrii in zone montagnose (On the Application of the Gravimeter to Mountainous Terrain). Riv. italiana petrolio, vol. 20, No. 4, 1942.

This paper describes field work with a Boucher gravimeter in mountainous country, the transportation of the instrument, the problems created by variations in altitude, and the topographic corrections. - V. S.

Generated on 2024-09-19 14:45 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7657. Thyssen, S. von. Über den Einfluss der durch den Wasserhaushalt hervorgerufenen Inhomogenität des Erdbodens auf Schweremessungen (Concerning the Influence Exerted on Gravity Measurements by the Ground's Inhomogeneity Created by Water Content). Beitr. angw. Geophys., Leipzi vol. 10, 1943, pp. 185-202.

The factors determining water content in the ground were investigated with precision. The results showed that the local and seasonal variations in such content can reach proportions at which they influence gravity measur ments. Therefore, the condition of ground-water levels should not be overlooked in precise gravimetric surveys. - V. S.

7658. Vening-Meinesz, F. A. The Equilibrium Figure of the Earth and the Indirect Isostatic or Bowie Reduction. Proc. Akad. Wetensch. Amsterdar vol. 45, 1942, pp. 611-618.

Spherical harmonic functions are applied in the derivation of new form las for calculating the geoid-undulations and the Bowie gravity reduction. is taken into consideration that the shift of masses connected with the isostatic reduction displaces not only the geoid but also the level surfaces of the core. Accordingly, additional reductions are necessary by means of whic to determine the shifts at the principal layer boundaries. These boundaries are established at the lower edge of the earth crust at a depth of 800 and 2,900 km. The masses filling in the spaces between the geoid and the spher must be regarded as uncompensated. The calculations are carried out by applying the Hayford and Airy isostasy formulas. - V. S.

2. MAGNETIC METHODS

7659. Bernstein, Arthur. A Survey of Methods of Constructing Magnetic Cha Terrestrial Magnetism and Atmospheric Electricity, Baltimore, Md., vol 49, No. 3, 1944, pp. 169-179.

No uniformity exists in the methods of constructing magnetic charts. tracing of contours is largely guided by individual judgment. The present survey of the literature on methods is made with a view to remedying this situation. Attention is centered on descriptions of the schemes of interpolation used in locating the isomagnetic lines. The discussion covers the charts of various countries and related problems, such as proposed methods representation, geometry of magnetic charts, choice of map projection, and suggestions for improving representation. - V. S.

7660. Coulomb, Jean. Partie principale de l'ensemble du champ magnétique terrestre et composante verticale locale (The Principal Part of the Te Terrestrial Magnetic Field and the Local Vertical Component). Comptes rendus Acad. Sci., Paris, vol. 216, No. 13, 1943, pp. 452-453.

Generated on 2024-09-19 14:39 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

P. Rougerie has used in his work on terrestrial magnetization the local magnetic constant "G" of L. A. Bauer. This constant corresponds to a uniform magnetization of the globe as computed from the data of a single station. The author points out that the principal part of the terrestrial magnetic field should be attributed to the radial magnetization of a superficial stratum of the earth. He derives a mathematical equation of the relationship between the values of uniform magnetization derived from one station, radial magnetization of superficial stratum, and the vertical magnetic component Z. This equation shows that the vertical magnetic component Z has a meaning wholly analogous to that of the local magnetic constant "G" of Bauer. Several considerations are further given in support of radial magnetization. The secular variations of Z are approximately proportional to the magnetization of a stratum which would produce the general secular variation. Vestin's map of secular variation resembles closely the map of izopores of Z. - V. S.

7661. Ehrenhaft, Felix. New Experiments About the Magnetic Current (Abs.). Phys. Rev., Lancaster, Pa., vol. 65, Nos. 1-2, 1944, pp. 62-63.

The author summarizes his latest work: Experimentally we have established the existence of magnetic currents in our discovery of magnetic ions, magnetolysis of water, and the electric field around magnetic currents. The following is a continuation of these experiments. In the dark field we observe that microscopic test bodies (for example, chromium, manganese, nickel) move in spiral paths or parts of spirals around a constant, vertical, homogeneous, magnetic field in air of atmospheric pressure, created in a magnetic condensor In dilute copper-sulfate solution blue-light-scattering particles of colloidal size become visible in the dark field between the aforesaid magnetodes. Each single colloid particle spirals up or down around the constant homogeneous vertical magnetic field, ending its movement on the upper or lower magnetode. These are the well-known copper particles that precipitate on iron. The described experiments in gases and liquids prove clearly the existence of bodies charged simultaneously electrically and magnetically. Because of their electric charges they move around the magnetic field along the electric force lines closed in circles. Because of their magnetic charges, north or south, they move upward or downward. The helix is the resultant path. (A bibliography of previous works is included - V. S.).

7662. Galmarini, A. G. Recent Geomagnetic Work and Plans of the Direccion de Meteorologia, Geofisica, e Hidrologia, Republica Argentina. Terrestrial Magnetism and Atmospheric Electricity, Baltimore, Md., vol. 49, No. 2, 1944, p. 131.

An isogonic map of Argentina was recently published by the Direccion de Meteorologia, Geofisica, e Hidrologia. It embodies the results of the magnetic survey for epoch January 1, 1944. Subsequent field work includes complete observations at 178 points. The Direccion proposes to publish isodynamic maps of horizontal and vertical force and an isoclinic map. - V. S.

Generated on 2024-09-19 14:43 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7663. Johnston, H. F. American Magnetic Character-Figure, C_A, Three-Hour-Range Indices, K, and Mean K-Indices, K_A, for January to June, 1944. Terrestrial Magnetism and Atmospheric Electricity, Baltimore, Md., vol. 49, Nos. 2-3, 1944, pp. 103-106, 181-184.

Tables and graphs are given with explanatory text. - V. S.

7664. Kendall, J. T. "Magnetic" Current. Nature, London, vol. 153, No. 3875, 1944, pp. 157-158.

The author has repeated two experiments of Ehrenhaft with a view to testing his conclusions on the existence of a magnetic current.

(1) When iron pole pieces of an electromagnet were immersed in hydrochloric acid, a steady stream of liquid was observed from the pole faces int the center of the gap, as Ehrenhaft had reported. But this movement is explained as due to the action of the strong, nonuniform magnetic field upon the concentration of paramagnetic ferrous ions. No movement occurred when potassium chloride or cadmium sulfate was used as solution. In another test the pole pieces were heavily plated with cadmium and were then immersed in dilute hydrochloric acid. Bubbles of gas were liberated as before, but the motion in the liquid was entirely unaffected by the magnetic field.

(2) Ehrenhaft's observation that oxygen is evolved at the north pole and hydrogen at the south pole was likewise confirmed. Namely, it was fou that the north pole showed 0.54 percent of oxygen and the south pole 0.49 p cent of oxygen. However, this small difference is explained by the heating the pole pieces (due to the current in the magnetizing coils) and the prese of air dissolved in the acid. The author reserves final judgment until a fuller account of Ehrenhaft's experiments is available. - V. S.

7665. Lauterbach, Robert. Geophysikalische Untersuchungen an der Roteisen vorkommen des Lahn-Gebietes (Geophysical Surveys of Hematite Occurrenc in the Lahn District). Gerlands Beitr. Geophys., Leipzig, vol. 59, 1942, pp. 191-200.

Magnetic surveys of hematite ore were undertaken in the Lahn district, completion of former work. They successfully differentiated between the ma netic anomalies caused by ore and the simultaneously appearing anomalies pr duced by diabases. The hematite deposits, in part newly discovered, were m thereby better amenable to further exploration. - V. S.

Malamphy, M. C., and Vallely, J. L. Geophysical Survey of the Arkansas Bau ite Region. Geophysics, Menasha, Wis., vol. 9, No. 3, 1944, pp. 324-3 (See No. 7653 of this issue.)

7666. Maurain, Charles. Sur les perturbations magnétiques à début brusque Sens des débuts brusques (The Magnetic Disturbances with Sudden Onsets Direction of Sudden Onsets). Compt. rend. Acad. Sci., Paris, vol. 21 No. 3, 1943, pp. 57-59.

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

The magnetic disturbances with sudden onsets (SC) have been previously studied by the author with respect to their frequency and amplitude (see Geophys. Abs. 118, No. 7529). A study is now presented on the direction of sudden onsets. This direction is termed positive if it corresponds to an increase in the components H, Z, D; and vice versa. The results in the area of Paris showed that for H the SC are always positive; and for D, generally positive. For Z, the SC had a negative direction at two observatories, and a positive direction at one observatory. This discrepancy led the author to study the material of numerous observatories situated in different parts of the globe. It was found again that the SC are almost always positive for H. As regards Z and D, the direction depends generally upon the location; certain broad regularities may be observed for large areas and for compass directions. - V. S.

7667. Modriniak, N. Geophysical Investigation of the Puhipuhi Mercury Deposit. New Zealand Jour. Sci. and Technol., B. General Section, Wellington, vol. 26, No. 2, 1944, pp. 61-65.

The magnetic survey of the Puhipuhi Plateau outlined the irregular thickness of the basalt sheet; the distribution of vertical magnetic intensity shows in first approximation the surface relief of the graywacke covered by the basalt. The close connection of loss of magnetic properties in basalt to thermal activity was shown. The area near and west of anomaly No. 5 is most likely to contain ore. - Author's abs.

7668. Rooney, W. J. Summary of Earth-Current Records from Tucson, Ariz., for a Complete Sunspot-Cycle. Terrestrial Magnetism and Atmospheric Electricity, Baltimore, Md., vol. 49, No. 3, 1944, pp. 147-157.

The final results of the cooperative project of the Department of Terrestrial Magnetism of the Carnegie Institution of Washington, the United States Coast and Geodetic Survey, and the Bell Telephone Co., for the measurement of earth currents at Tucson, Ariz., are summarized in eight tables. These tables give for each component yearly and monthly values of the mean diurnal variation as recorded on all days and on the 10 calmest days of each month. From the yearly values the general correlation between earth-current activity and solar activity, as indicated by sunspot numbers, is apparent. The monthly values confirm in detail a number of interesting and unusual features previously reported in connection with the seasonal variation in earth-current flow at Tucson. Since the records cover a full sunspot cycle and are quite complete and homogeneous, it is believed that they afford exceptionally useful material for further study of the relationship between magnetic variations, earth currents, and the conditions existing in the ionized layers of the upper atmosphere. - Author's abs.

7669. Strona, A. A. Magnetic Anomalies of Massalsk-Sukhinichi and the Problem of the Vertical Structure of Mid-Russian Highlands (in Russian). Sovetskaia Geologiia, Moscow, vol. 9, No. 2, 1941, p. 3.

Generated on 2024-09-19 14:48 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

Magnetic surveys made since 1934 revealed anomalies in the eastern part of the Smolensk Province. These anomalies generally formed a zone of varyin width, some 120 km. in length, stretching in a NW.-N. direction. The zone consists of two sections which have a complicated structure. The southern section, 40 km. long, has a maximal anomaly $V_a$max. = - 1.55 H_o in a SE. dire tion from Okhotnoe. The northern section has a maximal anomaly $V_a$max. = -1.65 H_o near Sovgorsk. The causes of the anomalies may be strong pre-Camb formations containing magnetite, as is the case with the Kursk magnetic anom From the structure of the anomalies conclusions are drawn as to the nature o the basement. - V. S.

7670. Terrestrial Magnetism and Atmospheric Electricity. Note: Magnetic Surveys in Airplanes by the U.S.S.R. T.M.A.E., Baltimore, Md., vol. 4 No. 3, 1944, p. 214.

In recent years attention has been called by various geophysicists to the advantages of magnetic surveys made from airplanes. Among these advantages are aids in geophysical prospecting, indications regarding depths of basic rock, and delineation of magnetic anomalies. In this connection it i of interest to recall a Russian pioneer effort in this direction. An exper mental survey was carried out in June 1936, under the auspices of the Centra Geological Research Institute of Leningrad, over the Starorusskaya magnetic anomaly on the Novgorod-Valday line. According to data of the Office of th General Magnetic Survey of the U.S.S.R., the vertical component of the eart magnetic field varies here between 250 and 1,400 gammas over an extension o 60 km. The survey was made by A. A. Logachev, who used an instrument of hi own construction (see Geophys. Abs. 87, No. 3282). - Condensed by V. S.

7671. Ting, S. L., and Lin, S. T. A Magnetometer for the Determination of the Vertical Component of the Earth's Magnetic Field. Rev. Sci. Instr ments, Lancaster, Pa., vol. 15, No. 7, 1944, pp. 171-177.

The magnetometer consists mainly of two parts: A Helmholtz-Gaugain co fixed on a horizontal divided circle for producing a uniform vertical magne field to balance the vertical component of the earth's field, and a magnet-balance system for observing the effect of the fields. The vertical compon of the earth's field is determined in terms of the coil constants and the strength of the current passing through the coil. The error due to the hor zontal component of the earth field and that due to the deviation of the ce of gravity of the balance system from the rotating axis are eliminated, re-spectively, by taking the mean value of two observations with the axis of t balance set first in one direction and then turned into the opposite direct by rotating the whole instrument through 180° about a vertical axis, and by reversing the polarity of the balance. The special features of the instru are as follows: (1) A pair of small solenoids is fixed inside the balance chamber and the balance can have its polarity reversed in its arrested posi tion without being taken out; and (2) by providing another pair of horizon coils on the chamber, the magnetometer serves at the same time as a galvan meter with the magnet balance as its moving magnet (the galvanometer is ne for the determination of the current and would otherwise be provided sepa-rately). By preliminary tests the instrument is found to give consistent results. Its sensitivity is about 1/2 minute per gamma. - Author's abs.

Generated on 2024-09-19 14:39 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7672. Warner, L. A. Iron Deposits of Kasaan Peninsula, Prince of Wales Island, Southeastern Alaska (abs.). Econ. Geol., Lancaster, Pa., vol. 39, No. 1, 1944, pp. 104-105.

There are high-grade deposits of magnetite containing some copper on Kasaan Peninsula, Prince of Wales Island, southeastern Alaska. They have been worked intermittently since 1900, principally for their copper content. In 1942 the Federal Geological Survey resumed a systematic study. Topographic, magnetic, and geologic surveys have been made at most of the deposits that have been mined or prospected. - V. S.

3. SEISMIC METHODS

7673. Angenheister, G. Bestimmung einer Grenzfläche durch Laufzeiten oder Richtungswinkel der reflektierten Wellen (The Determination of a Boundary Surface by Means of the Travel Time or the Angle of Direction of Reflected Waves). Ztschr. Geophys., Braunschweig, vol. 17, 1942, pp. 309-316.

A geological boundary surface is given which is plane and inclined; it is necessary to determine its dip and direction of strike. The data of seismic reflection, such as travel times or emergence angles, can serve for this determination. The author describes graphical and mathematical methods for such purpose. Since the spatial relationships in these problems are often difficult to visualize, they are clarified by means of a model and a spacial diagram (see No. 7736 in this issue). - V. S.

7674. Biot, M. A. Analytical and Experimental Methods in Engineering Seismology. Trans. Am. Soc. Civil Eng., New York, vol. 108, Paper 2183, 1943, pp. 365-408.

Analysis of strong-motion earthquakes by the U. S. Coast and Geodetic Survey has made available a mass of data dealing with the actual ground motion during an earthquake. The work of Professor Biot stems from this work and deals with the evaluation of earthquake stresses. The discussion is by George R. Rich, N. J. Hoff, Merit P. White, N. H. Heck, Frank Neumann, Jacob Feld, George W. Housner, Homer M. Hadley, Robert E. Glover, and M. A. Biot. Much valuable information on the subject is contained in both the original paper and in the discussions. - N. H. Heck, Bibliography of Seismology, No. 14, 1943, Dominion Observatory, Ottawa, 1944, p. 234.

7675. Bodle, R. R. United States Earthquakes, 1942. U. S. Coast and Geodetic Survey, Washington, D. C., Serial 662, 1944, 38 pp.

Earthquake activity in the United States and regions under its jurisdiction is summarized for the year 1942 under the following headings: (1) Noninstrumental results, (2) miscellaneous activity, (3) seismological observatory results, (4) strong-motion seismograph results, and (5) tilt observations. The text is illustrated by maps, tracings of accelerograph records, and tilt graphs. - V. S.

Generated on 2024-09-19 14:42 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7676. Bureau of Mines, U. S. A. Federal Explosives Act. Washington, D. C Government Printing Office, 1944, 55 pp.

In the present edition, the Federal Explosives Act of December 26, 194 (55 Stat. 863), has been revised as of June 1, 1944. Together with the revision are published the Regulations Issued Under Federal Explosives Act an the Recommendations for Storing, Handling, and Transporting Explosives. - V

7677. Daly, J. W. How to Make Velocity Corrections. Bull. Am. Assoc. Petrol. Geol., Tulsa, Okla., vol. 28, No. 5, 1944, pp. 615-628.

The fundamental assumptions in regard to velocity distribution and the effect of these assumptions in the computation of reflection-seismograph da are discussed. Simple methods for adjusting reflection-seismograph informa for lateral changes in vertical velocity are explained and illustrated. - Author's abs.

7678. Fisher, N. H. The Gazelle Peninsula, New Britain, Earthquake of January 14, 1941. Bull. Seismol. Soc. America, Berkeley, Calif., vol. 34, No. 1, 1944, pp. 1-12.

The earthquake of January 14, 1941, on Gazelle Peninsula, New Britain, is described with regard to general features, instrumental data, position o epicenter, surface effects, damage to property, tilting, seismic history, e Diagrams illustrate the text. - V. S.

7679. Gershánik, Simón. Resultados sismométricos del año 1935 (Results of Seismic Measurements in 1935). Observatorio Astronómico Universidad Nacional de La Plata, Serie Geofísica, vol. 6, No. 3, La Plata, 1941, 173 pp.

The results of seismological observations at the La Plata (Argentina) observatory in 1935 are reported under the headings of date, component, pha hour, period, amplitude (apparent and absolute), character of P, and notes phase and on epicenter. Subsidiary data are given on the instrumental con- stants (Fecha, Mainka, Wiechert), the monthly and geographical distribution of earthquakes, the earthquakes with abnormal foci, and the maximal amplitu observed. An introductory note deals with the location of the earthquakes. V. S.

7680. Gutenberg, Beno. Travel Times of Principal "P" and "S" Phases over Small Distances in Southern California. Bull. Seismol. Soc. America, Berkeley, Calif., vol. 34, No. 1, 1944, pp. 13-32.

A study has been made of arrival times of the principal P and S phases in 50 of the larger earthquakes in southern California. The results on tra times and apparent velocities are presented. The average true velocities o

Generated on 2024-09-19 14:40 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

P_v and S_v are about one-third of 1 percent and those of P_n and S_n about one-half of 1 percent smaller than the corresponding apparent velocities. In the uppermost 50 km. the velocity increases with depth. The order of magnitude of this increase is roughly 1 percent per 10 km., but larger in the uppermost 1 or 2 kilometers. The curvature of the earth can be disregarded within the range of distances used (in general not exceeding 800 km.). - V. S.

7681. Gutenberg, Beno. Energy Ratio of Reflected and Refracted Seismic Waves. Bull. Seismol. Soc. America, Berkeley, Calif., vol. 34, No. 2, 1944, pp. 85-101.

The investigation of amplitudes of elastic waves passing through layers of the earth, either in earthquakes or from artificial explosions, requires a knowledge of the distribution of energy at points of reflection or refraction, and also of the ratio between the amplitudes arriving at the surface of the earth and the displacements of the ground there. Some fundamental theoretical problems involved are discussed, and typical curves for the quantities mentioned are given. - Author's abs.

7682. Hayes, R. C. Earthquakes in New Zealand During the Year 1942. Dominion Observatory, Bull. S.69, Wellington, 1944, pp. 191b - 194b.

This report gives a list of principal earthquakes in New Zealand during 1942, with their dates, times, and maximum intensity, The distribution of the epicenters of these earthquakes is indicated on a map. The most notable feature of the map is the concentration of activity in the Wairarapa district. The other remarkable features during the year were a shock with a focal depth of 370 km., deepest so far recorded in New Zealand, and a shock in the southeast Tasman Sea where seismic activity occurs very rarely. - V. S.

7683. Henderson, J. T. Earthquake Risk in New Zealand. New Zealand Jour. Sci. Technol., Wellington, vol. 24, No. 5B, 1943, pp. 195B-219B.

References are given to accounts of earthquakes felt in New Zealand since European occupation. The topographical and geological evidences of still earlier earthquakes are briefly sketched as well as relevant points of geological structure. From these factors the risk of earthquakes in different parts of New Zealand is discussed. Next are described the wave motions of earthquakes and their effects on different kinds of ground, possible methods of approach to the problem of earthquake prediction, and how damage by earthquakes may be guarded against and reduced. - Author's abs.

7684. Hodgson, E. A. Bibliography of Seismology. Publications of the Dominion Observatory, Ottawa, vol. 13, No. 15, 1944, pp. 253-267. Price, 25 cents.

Generated on 2024-09-19 14:39 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

The current issue of this periodical contains, as usual, numerous entrie related to the seismic method of exploration and offers an interest to the geophysicists employing this method. - V. S.

7685. Jeffreys, H. H., and Bullen, K. E. Seismological Tables. British Assoc. Advanc. Sci., London, 1940.

The Royal Astronomical Society has published on different occasions various seismological tables of Jeffreys and Bellen. All of these tables are now reproduced in collected form. - V. S.

7686. Koridalin, E. A., and Masarskii, S. I. A Test of Deep Seismic Surveying (in Russian). Akademiia Nauk S.S.S.R., Trudy Seismologicheskogo Instituta, Moscow, No. 106, 1941, pp. 21-28.

In 1939 the Seismological Institute of U.S.S.R. made a seismic survey of the Moscow depression, the bottom of which is Pre-Cambrian. The purpose was to determine the depth of the crystalline basement and to differentiate the superposed sedimentary formation into its constituents. The geology of the region is described. Both reflection and refraction were used. The apparatu employed for refraction surveying was a new type of condenser-electroseismograph constructed in the laboratory of the Institute. It consisted of a vertical pendulum suspended on a spiral spring and connected with a differential condenser (see Geophys. Abs. 118, No. 7556). The model was tested in the laboratory under conditions approximating field work; it gave satisfacto seismograms at distances not exceeding 15 km. The velocities of seismic wav were determined for inclined boundaries primarily by means of successive hod graphs. The question of hodographs is discussed for the Serpukhov and Shats districts. The schemes of successive and reversed hodographs employed in th work are described and exemplified by drawings. - V. S.

7687. Martin, H. Einschwingvorgang und Stossaufzeichnung (Initial Oscillat and the Recording of Impact). Physikal. Ztschr., Leipzig, vol. 43, 19 pp. 222-226.

The author discusses oscillations caused by impact. At the outset the values of velocity, acceleration and displacement here equal zero. The following function, among others, can be used to represent this movement: $\{x = C\tau^n e^{-\alpha_1 \tau}$ for $n > 2$. The variation of this function and of its second derivative for different values of "n" are indicated on a graph. Theoretic considerations show that a seismograph equipped with optical magnification will record with precision the displacement expressed by this function when its proper period is sufficiently large in comparison with the time it take "x" to reach its first maximum. On the other hand, the seismograph will re cord with precision the acceleration when its proper period is sufficiently small in comparison with the same time interval. Shaking-table tests have indicated that for a movement caused by impact the displacement and the acceleration vary in a similar way. - V. S.

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7688. Masarskii, S. I. Some Possible Conflicts in the Interpretation of Hodographs of Waves Refracted from a Three-Layered Structure (in Russian). Akademiia Nauk S.S.S.R., Trudy Seismologicheskogo Instituta, Moscow, No. 106, 1941, pp. 42-44.

The interpretation of hodographs is usually made on the basis of their direct and return records. These records give an identical interpretation only in the case of structures with one dividing boundary. But in actual surveying there often occur many dividing boundaries. The customary practice in such cases is to disregard the intermediate boundaries and to base interpretation solely on the horizon investigated. This oversimplification leads to errors. The present paper analyzes the error made in one inclined boundary intervening between two horizontal boundaries. The equations for the direct and the returning waves show here a different inclination, even though the last boundary is horizontal. If the intermediate horizon were disregarded, the interpretation placed on this difference between direct and returning waves would be that the last boundary is inclined, which is erroneous. The discussion is illustrated by examples of special instances. - V. S.

7689. Montandon, Frederic. Les séismes de forte intensité en Suisse (The Seismisms of Strong Intensity in Switzerland). Revue pour l'étude des calamités, Genève, vol. 5, Nos. 18-19, 1942, pp. 107-169; vol. 6, No. 20, 1943, pp. 3-49.

The author describes the strong earthquakes in Switzerland classifiable under intensity-gradations VII-XII of the International Scale of Intensities, 1917. These classes include earthquakes producing marked damage to buildings. The description covers the IX-XX centuries. For each class of intensities there are indicated the corresponding accelerations according to Cancani and the principal seismic effects according to the international scale, the scale of Sieberg, and the American and Japanese scales. This description is accompanied by a discussion of seismic statistics, principal seismic regions in Switzerland, and comparative intensities of some Swiss and foreign earthquakes. An alphabetical list of earthquakes gives their location, year, and intensity classification. A bibliography on Swiss earthquakes covering 273 entries is included. - V. S.

7690. Ott, H. Reflexion und Brechung von Kugelwellen; Effekte 2. Ordnung. (The Reflection and Refraction of Spherical Waves; Effects of 2d Order). Ann. Physik, Leipzig, vol. 41, 1942, pp. 443-466.

The author has analyzed mathematically the reflection and refraction of spherical waves. This investigation was made with reference to wave impulses sharper than usual, whether or not accompanied by dispersion. It showed the presence of a border wave ("Flankenwelle") existing together with the usual reflected and refracted waves. This wave travels along the boundary surface with the velocity of the lower medium and radiates upward at the angle of total reflection. It has long been used in seismology, but is not yet explained satisfactorily. Such waves have been received by O. von Schmidt. - V. S.

Generated on 2024-09-19 14:41 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

Peacock, H. B. The Geophysical History of the Cayuga Field, Anderson County, Tex. Geophysics, Menasha, Wis., vol. 9, No. 3, 1944, pp. 299-313 (see No. 7655 in this issue).

7691. Popov, V. V. The Density of Distribution of the Epicenters of Earthquakes on the Territory of the U.S.S.R. (in Russian). Akademiia Nauk S.S.S.R., Trudy Seismologicheskogo Instituta, Moscow, No. 106, 1941, pp. 9-11.

A map of the density of epicenters of earthquakes in U.S.S.R. is presented. It has been prepared as follows: (1) A geographic map of U.S.S.R. was divided into sections formed by meridians and parallels at 5° intervals A net of trapeziform subdivisions was thus obtained. (2) Inside each trapezium, along its sides, were plotted dots representing the number of epicenters in the respective locality. The bulletins of teleseismic stations of the U.S.S.R. for 1912-37 provided material; they supplied data concernin over 800 epicenters and covered the territory of the entire U.S.S.R. Relative density in different trapezia was indicated by shading them with diffe ent colors. This map revealed the following features: (1) In the Crimea, Caucasus, and central Asia the greatest number of epicenters is found in th zone between 35° and 45° northern longitude; (2) in the regions of the Lake Baikal and Kamchatka this number is found between 50° and 55° northern long tude. Significantly, the indicated zones correspond to the principal mountains of U.S.S.R.

As an extension of this work, the coefficients of epicentral density were further computed for some separate regions of U.S.S.R. They gave the following distribution: Pamir-Altai, 21-20; Tian Shan, 10; Caucasus, 4-8; Lake Baikal region, 6; and Kamchatka, 4. The computation of coefficients is described; it does not take into account the change in the area of the trapezoids with changing latitude. As a further extension of this work, histograms of epicentral density were plotted for central Asia and the Caucasus, where the data were available for subdivisions of 2°. These more precise determinations confirmed the observed correspondence between epicentral density and mountain distribution. - V. S.

7692. Roberts, John. Earthquakes Reveal Oil Fields. Petrol. Times, Londo vol. 48, No. 1,221, 1944, pp. 315-317, 323.

The author inquires into the connection between earthquakes and oil fields and advances a hypothesis of oil formation by rock disturbance (see also Geophys. Abs. 114, No. 7090). Every faulted region has been subjected in the past to earthquakes, creating rock displacements and producing earth tremors. At the same time, fault formation generates frictional heat, whic is a factor in producing oil. Supporting examples are cited in California, New Zealand, Japan, Turkey, and Iraq; in the Los Angeles area, oil pools li either parallel with the mountains or along other displacement zones. Thes considerations are offered in expansion of the author's metamorphic distillation theory of oil formation. Some other facts are presented in support

Generated on 2024-09-19 14:40 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

this theory, and refutations of criticisms are made. Conclusions are derived as to the possible discovery of new oil fields. Promising in this respect are extensions of the Iraq fields from Mosul both northwestward into Syria and Turkey, and southwestward to Beirut and Cyprus. - V. S.

7693. Scholte, J. G. On Surface Waves in a Stratified Medium. Proc. Akad. Wetensch. Amsterdam, vol. 45, 1942, pp. 380-386, 449-456, 516-523.

When a plane wave moves in space toward a level boundary surface, three kinds of surface waves can be expected: (1) Love waves in the case of a transversal wave travelling perpendicular to the plane of strike; (2) generalized Rayleigh waves in the case of a very thick or very thin upper stratum; and (3) generalized Stoneley waves travelling along the boundary surface and having an amplitude fading exponentially above and below the boundary surface; the latter waves appear only when the thickness of the upper stratum is large in comparison with wave length. Theoretical calculations show that these types of waves can arise if the amplitude of the plane wave approaching the boundary surface is simultaneously reduced to zero. The Rayleigh and Stoneley waves appear only when the elastic constants of the strata are within certain definite limits. The Stoneley waves are studied by the author in detail. - V. S.

7694. Shnirman, G. L. An Electromagnetic Seismograph of High Sensitivity (in Russian). Akademiia Nauk S.S.S.R., Trudy Seismologicheskogo Instituta, Moscow, No. 106, 1941, pp. 49-53.

A new seismograph is offered for reflection surveying. It is made possible by the introduction of nickel-aluminum alloys with high magnetic reluctance. When such a magnet moves between two cores rigidly connected one with another, the magnetic field is redistributed in the cores while it changes little in the magnet. Mathematical equations are written for induced currents and electromotive forces generated in the cores by the displacements of the magnet. The seismograph has a small, rectangular magnet attached to two interconnected horizontal bars. These bars are fastened by means of flat steel springs to the frame of the apparatus. Above and below the bars are placed magnetic cores and coils rigidly attached to the frame. By virtue of the springs the magnet can have small vertical oscillations between the cores. The damping of oscillations is effected by means of pistons. - V. S.

7695. Sloat, John. How NOT to Find an Oil Field. Geophysics, Menasha, Wis., vol. 9, No. 4, 1944, 431-446.

This paper discusses causes and cases of seismograph misinterpretation, with examples of errors resulting from certain spreads, from weathering computations, and from incorrect velocity assumptions. The question is raised as to whether subterranean weathering corrections, echo reflections, transverse waves or regional velocity gradients have caused serious mismapping of

Generated on 2024-09-19 14:39 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

structure. The evaluation of results from dip shooting is reviewed, with cases showing how oil fields have been missed. The psychological factor in picking records is stressed and the use of marked records in correlation is questioned. The need for a better criterion of correlation is expressed, and it is suggested that a more complete study of results might result in fewer dry holes. - Author's abs.

7696. Swan, B. G. Index of Wells Shot for Velocity. Geophysics, Menasha, Wis., vol. 9, No. 4, 1944, pp. 540-559.

This index lists 811 wells in which seismic velocity surveys have been made. In so far as possible to obtain, information has been listed concerning the location, survey depth, by whom and when made, and the company or cooperative association responsible for the survey. It is intended that the index be brought up to date at approximately 6-month intervals in future issues of Geophysics. - Author's abs.

7697. Trappe, F. Die reflexionsseismische Untersuchung an der Flankenzone eines norddeutschen Salzstocks (A Seismic Reflection Survey of the Fla Zone of a North German Salt Dome). Oel u. Kohle, Berlin, vol. 38, 19 p. 1429.

A salt dome in northern Germany was studied which had been previously explored by torsion balance and seismic refraction. A reflection survey wa now undertaken of its flank zone to amplify the information. No continuous profiling was made, but close attention was paid to linking together reflec tions of the same character. The velocities used for calculations were smaller than those proved by refraction. On the basis of this work a flank hole was bored. An error of only 4 percent was made in reaching the upper Cretaceous layer, and a very good profile of strata was obtained. A later survey covered the deeper layers. It was made in 1941 by means of seismograph equipment with automatic equalization of amplitudes. This novelty made it possible to obtain more definite reflections for shallower depths. Deep boring substantiated the accuracy of findings. In all, seismic reflec tions gave information on the lower boundary of the Miocene, the middle range of the Upper Eocene, the Tertiary Cretaceous boundary, and a Turonian horizon near the upper boundary. - V. S.

7698. Willis, Bailey. Philippine Earthquakes and Structure. Bull. Seism Soc. America, Berkeley, Calif., vol. 34, No. 2, 1944, pp. 69-81.

The accompanying two maps show the distribution of earthquake epicent in the Philippine archipelago as plotted by W. C. Repetti. The text prese their relations to active structures of several types observed by the writ in a geological reconnaissance in the spring of 1937. The dynamics of the archipelago and the mechanisms of the stresses are sketched in accordance with the hypothesis that the Philippine block is an erupted mass rising al the contact between the crustal elements that respectively underlie the Ch Sea and the adjacent Pacific Basin. - Author's abs.

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7699. Zanon, F. S. Microsismi prodotti da urti (Microseisms Produced by Shocks). Geofis. Pura Appl., Messina, vol. 4, 1942, pp. 97-102.

The stranding of a 550-ton steamer in the Giudecca Channel, Venice, produced two strong shocks. The ensuing microseisms were recorded at the geophysical observatory. The vertical and horizontal components registered by Vincentini and Agamennone instruments are presented. The dependence of curves on the condition of the ground is discussed. The interval between the two shocks computed from the curves was 23 sec. - V. S.

4. ELECTRICAL METHODS

7700. Bulashevich, Yu.P. Concerning the Question of Studying Electrical Anomalies on Models (in Russian). Bull. Acad. Sci. U.R.S.S. (Izvestiia), Ser. Geog. Geophys., Moscow, No. 6, 1943, pp. 354-358.

In electrical prospecting, interpretation aims at determining the causes of anomalies. For such a purpose the experimental study of models in the laboratory offers greater possibilities than theoretical deduction. However, models often have dimensions of the order of meters and must be made hollow. Their conductivity is thereby affected. There arises, therefore, the problem of the equivalence of solid and hollow figures for the electrical conductivities customary in prospecting. The author compares the modifications produced in electrical fields (D.C.) by solid and hollow models. He calculates the effective conductivity of a solid and hollow sphere and cylinder in a heterogeneous and homogeneous electrical field. The mathematics are presented. They show that, under certain conditions, a hollow body behaves in any D.C. field in the same manner as a solid body. Some forms of the body are more conducive to equivalence of effects than other forms. - V. S.

7701. Calfas, P. La prospection électrique du sous-sol. La recherche et l'étude des champs pétrolifères et des gisements houillers (Electrical Prospecting of the Subsoil. The Search and Study of Petroliferous Fields and Oil Deposits). Génie civil, Paris, vol. 119, 1942, pp. 217-220.

A description is given of the customary methods of electrical prospecting. Detailed consideration is devoted to the Schlumberger equipotential method and to the electrical logging of boreholes. - V. S.

7702. Ebert, A. Grundlagen zur Auswertung geoelektrischer Tiefenmessungen (Foundations of the Evaluation of Geoelectrical Measurements in Depth). Beitr. angew. Geophys., Leipzig, vol. 10, 1942, pp. 1-17.

The author discusses the interpretation of measurements of electrical resistivity. Basic principles are advanced for the cases of two and three ground layers. The problem of three layers is treated by reference to two layers. Consideration is given to the possibilities of interpretation in the case of four layers. - V. S.

Generated on 2024-09-19 14:52 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7703. Fitzgerald, P. E. Some Recent Advances in Well Treating Methods and Equipment (World Petrol. Abs.). World Petrol., New York, vol. 15, No. 10, 1944, p. 98.

The Dowell electric pilot is an electrically operated device indicatin the position of the interface between conductive and nonconductive fluids. Originally it served for controlling the selective acidizing of oil wells. At present its application has been extended to well surveying. One valuab use is the accurate location and evaluation of permeable zones in a well. making such well profiles the usual procedure is to introduce enough salt water to cover the section to be surveyed and then to force this fluid into the formation at a constant rate by following with oil. Obviously, the rat of the fall of the salt water-oil interface is more rapid when the salt wat stands opposite a permeable zone. The data obtained are quantitative. Whe plotted, they show the position and relative importance of the various perm able zones. Some other uses of the electric pilot are indicated. - V. S.

7704. Grosskopf, J., and Vogt, K. Ausbreitungsmessungen über inhomogenem Boden (Measurements of Propagation Over an Inhomogeneous Ground). Hochfrequenztechn., Leipzig, vol. 60, 1942, pp. 97-99.

Measurements were made of the radiation of a vertical dipole sender ov an inhomogeneous ground. Two antennae were used. The magnitude and phase the field's intensity, the dielectric constant, and the conductivity of the ground were determined. The stations were distributed over a circle with a radius of 50 meters. It was also possible to calculate the ground constant related to the dielectric constant and to the conductivity; the methods are described. The effective ground constants further served for computing the field strength and the phase curve. These calculated values were then com- pared with the empirical values obtained by the measurements. An example o the comparison is presented, showing a good agreement between empirical and computed results; a marked inhomogeneity of the ground is indicated in a given azimuthal direction. - V. S.

7705. Guyod, Hubert. Electrical Well Logging. Parts 4-15. Oil Weekly, Houston, Tex., vols. 114-115, 1944.

This series aims at dealing with electrical well logging in its entir It covers the various problems and techinques with regard to both their th retical basis and practical application. Each subject is treated in detai many particular cases are discussed, numerous drawings, tabulations, and summaries are given, and bibliographies are added. The contents are organ into the following subdivisions (for parts 1-3 see Geophys. Abs. 118, Nos. 7560-62):

Part 4: Multiple-electrode logging methods, vol. 114, No. 13, pp. 34
Part 5: The logging of parallel beds, vol. 115, No. 1, pp. 42-64.
Parts 6-7: The three-electrode method, vol. 115, Nos. 2-3, pp. 26-40 36-52.

Generated on 2024-09-19 14:41 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

Part 8: The four-electrode method, vol. 115, No. 5, pp. 48-57.
Parts 9-10: The two-electrode method, vol. 115, Nos. 6-7, pp. 44-58, 36-54.
Part 11: Fundamental properties of resistance curves, vol. 115, No. 8, pp. 48-50.
Part 12: Fundamental data for the interpretation of electric logs, vol. 115, No. 9, pp. 38-46.
Part 13: Electrical properties of oil-bearing reservoirs, vol. 115, No. 11, pp. 40-52.
Parts 14-15: Electrical potentials in boreholes, vol. 115, Nos. 12-13, pp. 44-56, 40-56.
Part 16: Conclusion of series: Applications of electrical logs, vol. 116, No. 1, pp. 50-52.

Brief abstracts accompany most parts. - V. S.

7706. Landes, K. K., and Wilson, J. T. Ground-Water Exploration by Earth-Resistivity Methods. Papers of Michigan Acad. Science, Arts and Letters, 1943, Ann Arbor, vol. 29, 1944, pp. 345-355.

The ground waters of Michigan were surveyed geophysically. Since most supplies are here obtained from fluvioglacial sediments in glacial drift sheets, earth-resistivity methods were considered best-suited for exploration. The Plymouth district was chosen as a test area; eight stations were occupied within Plymouth city limits and three stations in the Canton township. The apparatus and procedure are described, and the data and interpretation discussed. The conclusion is reached that electrical resistivity methods should be used in the search for ground water both in the glacial drift of Michigan and elsewhere. The drill is still necessary, but the number of holes drilled can be cut to half. The average total cost of a resistivity survey is less than the cost of one drilled well. - V. S.

7707. Moore, R. W. An Empirical Method of Interpretation of Earth-Resistivity Measurements. Am. Inst. Min. and Met. Eng., New York, Tech. Pub. 1743, 1944, 18 pp.

A graphical method of analyzing the data obtained from shallow earth-resistivity-depth tests is presented. The method is based upon empirical results and has no theoretical basis. The usual apparent resistivity-electrode spacing curve is used together with a cumulative resistivity-electrode spacing curve plotted on the same sheet. The greatly reduced scale required for plotting the cumulative values of resistivity together with the effect of the summation of the individual resistivity values serves to minimize the effect of purely local surface anomalies and inadvertent errors of measurement. The point of intersection of tangents or straight lines drawn to intersect at zones of maximum curvature in the cumulative curve indicates the depth to the underlying material. Numerous figures are presented in which data from published reports and from recent field studies are analyzed and the results compared with actual depths established by borings or with depth values obtained by the use of theoretical methods of analysis.

Generated on 2024-09-19 14:41 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

Smoothly rounded curves of apparent resistivity such as are often obtained in the field, and which have been a serious drawback to attempts to analyze the data empirically heretofore, appear to be susceptible to rather accurat analysis by the method described. The method is best suited to analyses in volving shallow two-layer formations. It has been applied successfully, ho ever, in analyzing the data obtained from tests made over shallow three-lay formations. As with most empirical methods, its chief advantage is its simplicity and ease of application. - Author's abs.

7708. Müller, Max. Die Abnahme der Stromdichte einer elektrischen Doppelquelle mit wachsender Entfernung (The Decrease of the Current Density of an Electric Doublet with an Increase of Distance). Ztschr. Geophys Braunschweig, vol. 18, 1943, pp. 67-75.

Theoretically the current density of an electric doublet decreases wit distance. More specifically, it decreases for spatial conductors with the cube of distance; for plane conductors, with the square of distance; and wi linear conductors, directly with distance. There follows from this relatio ship the conclusion that the electrical localization of disturbing bodies is possible at greater distances with the use of linear and plane conductor than with the use of spatial conductors. Moreover, in the case of a use of alternating current, the effective distance depends also on frequency. - V.

7709. Pluvinage, Philippe. Influence de la convection thermique sur le champ électrique terrestre (The Influence of Thermal Convection Upon the Terrestrial Electrical Field). Compt. rend., Acad. Sci., Paris, vol. 216, No. 9, 1943, pp. 303-304.

Observations of the terrestrial electrical field are often made in the absence of steady winds. Continuous and uniform sweeping of atmospheric io is thus lacking. The author observed in 1943 the effects of such an atmospheric change on the measurement of electrical anomalies. At the summit station of the Puy de Dôme, France, a local thermal convection produced in summer an ascending vertical air current substituted for the ordinary regul wind. This current lasted several hours at a time and reached a height of 740 m.; inside its column the air was very agitated. On these occasions th terrestrial electrical field registered very pronounced disturbances. The potential was measured by the procedure of C. W. Lutz (Gerlands Beit. Geoph vol. 31, 1937, p. 398). The results showed that the values recorded were about doubled, namely: 280 instead of 150 V/m at 8 a.m., and 450 instead o 220 V/m at 5 p.m. The records indicated considerable fluctuation, contrast ing with the stability of ordinary measurements in the Puy de Dôme. - V. S.

7710. Rose, N. A., White, W. N., and Livingston, Penn. Exploratory Water-Well Drilling in the Houston District, Texas. Geol. Survey Water-Supp Paper 889-D, Washington, D. C., 1944, 315 pp. Price, 15 cents.

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

In 1939 a program of exploratory drilling was undertaken in the Houston district, Tex., in connection with a general investigation of the water resources of the district. Thirteen test wells, 5-1/2 inches in diameter and ranging in depth from 360 to 2,000 feet, were put down with a hydraulic rotary drill. All were electrically logged. On the whole, the results tend to show that, although electrical logs give much information that is useful in the development of water wells, for the present at least these logs should be used in conjunction with driller's logs and drill-stem sampling of both sand and water in all the more promising sand horizons. - Authors' abs., condensed by V. S.

7711. Short, E. H., Jr. Electrical Prospecting Method Used in Gulf Coast Search for New Reserves. Oil and Gas Jour., Tulsa, Okla., vol. 43, No. 10, 1944, pp. 70-77.

A new electrical-resistivity method of prospecting is reported. It involves the use of the Elflex apparatus designed on the idea of K. Evjen. This apparatus measures a potential produced by a unit current of definite frequency. The measurements indicate the average resistivity of a section of earth about 1,000 feet in thickness. The depth of this section can be controlled by maintaining the necessary frequency, because deeper formations influence lower frequencies. The observed readings themselves give the type of information desired, without the necessity of elaborate calculations. The field equipment consists of an instrument truck and a cable truck. Stations are usually set 1,500 feet apart; electrodes are arranged according to a definite scheme. The use of measurements is illustrated in the paper by examples of contour maps. The method should be of assistance in finding oil beds, particularly in cases of stratigraphic traps with no detectable structure. It is now used along the Gulf coast. (A review appears in Min. Jour., London, vol. 223, No. 5695, 1944, p. 627.) - V. S.

7712. West, T. S., and Beacham, C. C. Precise Measurement of Deep Electrical Anomalies. Geophysics, Menasha, Wis., vol. 9, No. 4, 1944, pp. 494-539.

A method of electrical prospecting has been developed in which the deleterious effects of superficial inhomogeneities in resistivity are eliminated. An electrode configuration is used consisting of a current electrode at "infinity", a pair of current electrodes with a constant separation of a few hundred feet which are used alternately, and a pair of potential electrodes with a constant separation of a few hundred feet, collinear with the pair of current electrodes, and at a distance from them which is varied to secure depth resolution. It is demonstrated that superficial influences are eliminated by forming the resistivity increment, the ratio between apparent resistivity determined by use of the closer current electrode of the alternate pair and that determined by use of the farther current electrode of the alternate pair. It is also demonstrated that the area explored is below a point approximately half-way between the alternate pair of current electrodes.

Resistivity increment curves, called RESISTOLOGS by the authors, can be correlated from station to station, and after they are correlated the lateral

Generated on 2024-09-19 14:47 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

variation in the electrical properties of selected subsurface zones can be studied. As a result of the latter characteristic of the measurements, a possibility exists for the direct location of oil and gas, observational evidence for which is presented.

The results of surveys made in Hart County, Ky., and in the Sam Fordyce Seven Sisters, Pettus, Branyon, Dunlap, Oakville, and Rhode Ranch fields of southwest Texas are displayed. - Authors' abs.

5. RADIOACTIVE METHODS

7713. Beers, R. F., and Goodman, Clark. Distribution of Radioactivity in Ancient Sediments. Bull. Geol. Soc. America, Baltimore, Md., vol. 55, No. 10, 1944, pp. 1229-1254.

By the use of beta-ray counters a method has been developed for the determination of the three radioactive constituents in ancient sediments - potassium, thorium, and uranium. Owing to the high efficiency of the counters to beta radiation only 3 grams of sample are required. The apparatus is calibrated with radioactive standards. Over 300 samples representing several distinct types of sedimentary rocks have been measured. The highest concentration of all three radioactive constituents was found in the Antrim formation, an organic black shale of Mississippian-Devonian age in Michigan. Similar characteristics were observed in the Chattanooga formation from wells in Oklahoma. These black shales show maxima of organic matter, uranium, thorium, potassium, colloidal size grades, and throium:uranium ratio. The radioactivity measurements are complicated by the high emanating power of these shales. Logs of beta-ray activity, alpha-ray activity, and estimated percent black shale have been made on cuttings from Pure No. 3 Gingrich, Osceola County, Mich., between depths of 1,600 and 3,200 feet. These logs included the Marshall and Ellsworth formations, the Antrim shale, and the Traverse limestone. The results indicate significant variations in the distribution of radioactive elements and organic materials in these sedimentary rocks. It is concluded that the principal loci of radioactivity are (1) in heavy minerals in sands and sandstones, (2) in potassium-bearing sediments and (3) in sediments of colloidal deposition. These relationships are of possible importance in defining the source beds of petroleum. - Author's a

7714. Belluigi, Arnaldo. Determinazione della potenza della coperture e profondita di alimentatori geologici metaniferi con misure gasometric (The Determination of the Depth and Stratum-Thickness of Geological Accumulations of Methane by Means of Gasometric Measurements). Metan vol. 4, No. 11, 1942, p. 13.

A mathematical hypothesis is presented for the exploration of subter ranean gas accumulations. It is based upon Königsberger's theory of emana tion from radioactive centers covered by alluvial strata. A new apparatu is also offered for micrographic measurements. It can serve for the measu ment of gas accumulations discovered by drilling and otherwise. Its data comparable with similar data secured by other methods. - V. S.

Generated on 2024-09-19 14:40 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7715. Goodman, Clark, and Evans, R. D. Determination of the Helium Content of Terrestrial Materials. Rev. Sci. Instruments, Lancaster, Pa., vol. 15, No. 5, 1944, pp. 123-128.

With only minor modifications, the direct-fusion technique, as previously developed for emanation measurements, can also be employed to liberate helium from terrestrial materials. The rock gases are purified, and the helium is measured quantitatively with a sensitive McLeod gauge. In geological age studies of igneous rocks and "nonradioactive" minerals, the helium contents ranged from 0.25×10^{-5} to 65×10^{-5} with modal and median values of 1.8×10^{-5} cc. He (at 0° C. and 76 cm. Hg) per gram. - Author's abs.

7716. Keevil, N. B., Larsen, E. S., and Wank, F. J. The Distribution of Helium and Radioactivity in Rocks: The Ayer Granite-Magmatite at Chelmsford, Mass. Am. Jour. Sci., New Haven, Conn., vol. 242, No. 7, 1944, pp. 345-353.

Of 12 minerals studied in concentrates from the Chelmsford granite-magmatite, zircon, apatite, epidote, and biotite have more than 5 times the radioactivity of the parent rock; accessory minerals account for half the total radioactivity. A 150,000-fold contrast in helium content was found between zircon and feldspar, yet the zircon containing 1.2 cc./gm. appears to retain helium, while more than 90 percent has escaped from feldspar and quartz. Excess helium over that produced since Carboniferous time was found in sphene. - Authors' abs.

7717. Khlopin, V. G. Radicactive Methods for Determining the Geological Age of Some Geological Formations in the U.S.S.R. (in Russian). International Geological Congress, Report of 17th Session, Moscow-Leningrad, 1937, vol. 4, Moscow, 1940, pp. 485-494.

The Joint Committee for the Determination of Geological Age, State Radium Institute of U.S.S.R., has taken the view that the process of radioactive disintegration is the most precise criterion of geological time. This disintegration occurs with a constant velocity and produces changes in the surrounding medium which characterize age and can be measured. The measurements may be made by means of the lead, helium, and oxygen methods; the methods are outlined. Geological age has been determined for different minerals and rocks containing uranium and thorium. The calculations were based on special nomograms. The following results were obtained: (1) The lead, helium, and oxygen methods give in application to different minerals of the North Karelian pegmatite dikes the lowest age limit as 1.6×10^{9} years; (2) the lead and helium methods give in application to minerals of the Khibine massive the age of 3.4×10^{8} year; and (3) the lead and helium methods give in application to the various minerals of the pegmatites of the Khilka region the age of 1.8×10^{8} years. - V. S.

Generated on 2024-09-19 14:41 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7718. Maxwell, C. T. Radioactivity Logs Prove Advantageous in Oil-Base Mud. Tomorrow's Tools - Today, Lane-Wells Co., Los Angeles, Calif., vol. 10, No. 3, 1944, pp. 22-23.

It is difficult to obtain satisfactory electrical logs in oil-base mud. This difficulty can be overcome by using radioactivity logging which is not affected by oil-base mud or any of the drilling fluids normally employed in drilling operations. Moreover, the radioactivity logging is just as effective when run after casing is cemented through a zone for completion by selective gun perforation. - Author's abs.

7719. Sawdon, W. A. Application of Radioactivity Logging to Special Drilling Problems. Petrol. Eng., Dallas, Tex., vol. 15, No. 9, 1944, pp. 66-68.

Radioactivity logging is being applied to an ever widening range of tasks. Originally it was developed to locate cased-off production by tracing formations behind strings of pipe. Now it is also employed to clarify subsurface records, check depths and thicknesses, furnish material for correlation, and supply data for various down-hole operations. There are, furthermore, many special jobs. (1) In some problems the applicability of radioactivity logging has been broadened by combining it with neutron logging. (2) A radioactivity log can be used in wells with muds contaminated by salt because it is not affected by the condition of the fluid. (3) Permeable zones may be located by placing a radioactive material in the drilling fluid and forcing it into the formation under pressure. (4) Artesian flow can be plugged accurately by identifying water-producing strata by means of logging. (5) Squeeze jobs are helped by adding radioactive carnotite to the cement. Some other applications are listed. - V. S.

7720. Shepherd, G. F. Use of Gamma-Ray Logs in Measurement Problems. Oil Weekly, Houston, Tex., vol. 113, No. 10, 1944, pp. 40-54.

At present the oil industry has to develop relatively thin reservoirs at increasing depths. Such work depends on correct depth measurements. Unfortunately, different types of logs often give incomplete and conflicting measurements. In order to clarify the determinations, it is helpful to use gamma-ray logs. The problem is here reduced to determining: (a) The position of the object-sand on the log, and (b) the distance of this position down to the total depth of the log. This problem is discussed in connection with electrical logs, drilling time logs, gamma-ray logs, sources of error in correlation, statistical errors, multiple correlation, correction factor etc. The following combined method is offered: (1) Tabulate all apparent correlative points between electrical and gamma-ray logs; (2) select a correction factor for each zone; (3) if more than one zone is found, determine where the change in correction factors occurs; (4) identify the position of the object sands on the gamma-ray log by applying the correction factor when the position cannot be established directly by correlation; and (5) calculate distance above the datum zero on the gamma-ray log to completion depths in the object sands. The paper is supplied with a bibliography. - V. S.

Generated on 2024-09-19 15:26 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7721. Simpson, J. A., Jr. Four-Pi Solid Angle G-M Counters. Rev. Sci. Instruments, Lancaster, Pa., vol. 15, No. 5, 1944, pp. 119-122.

Two types of Geiger-Müller counters which count the particles in a solid angle slightly less than 4π are described. The use of thin metal windows permits their use with low-energy β-particles. They are useful for small point sources or in determining the radioactivity of thin foils. Details of the construction are presented. A differential vacuum system for filling thin-window 4π counters is described. - Author's abs.

7722. Sterrett, Elton. Radon Emanations Outline Formations. Oil Weekly, Houston, Tex., vol. 115, No. 4, 1944, pp. 29-32.

Recent work with radon emanations shows that they can be applied to subsurface exploration for oil. The equipment used differs little from that first adapted to collect the emanations. The improvements consist in a better understanding and interpretation of findings. They point to different types of geological conditions where the radon emanations can be serviceable, either alone or in conjunction with other methods. The following problems are considered by the author: (1) Defining shoestring pools, (2) determining oil-water contact; (3) checking "pimple" pools; and (4) finding closure against a fault. The discussion is illustrated by examples of survey maps. - V. S.

6. GEOTHERMAL METHODS

7723. Kraskovsky, S. A. Geothermal Measurements in Ore Deposits (in Russian). Akademiia Nauk S.S.S.R., Trudy Komissii po Geotermike, Moscow, Vypusk I, 1941, pp. 10-11.

The author reviews geothermal measurements in regions of Russian ore deposits from the beginning of such work; he does not claim complete information. In 1828 Cupffer surveyed three copper mines in the Urals. The temperature measured at depths of 30 to 112 meters in the water ranged from 3° to 6° C.; the geothermal gradient computed by the method of least squares was 24.8 m./C°. In 1894 Zalessky surveyed the Il'inskii gold mine in eastern Siberia at a depth of 160 meters and found the temperature of the rock to be 2.5° C. In 1913 Iachevskii made measurements in the Siberian iron mine "Abakanskaia Blagodat"; the temperature in a borehole at a depth of 118.4 meters was 5.5° C. and the geothermal gradient 36.8 m./C°. He also surveyed in the same year the Nikitovka mercury mine in the Don Basin; the temperature at a depth of 72.4 meters was 14° C. and the geothermal gradient 11.6 m./C°. In 1933 Popov studied a borehole in the town of Krivoi Rog and found a temperature of 20.5° C. at a depth 1,125 meters and a geothermal gradient 112.5 m./C°. In 1938 Vladimirov, Kraskovsky, and Semenov made several surveys in the Artic, on the Kola Peninsula. They found, for depths of 300 to 450 meters, temperatures from 4.25° to 5.45° C. and gradients from 136.1 to 170.7 m./C°. The paper gives some details and conclusions of the described work. - V. S.

Generated on 2024-09-19 14:40 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7724. Mühlberg, Max. Temperaturmessungen in der Bohrung Tuggen in der Linthebene und einige andere Befunde in der Schweiz (Temperature Measurements in the Borehole near Tuggen in the Linth Plain, and Other Findings in Switzerland). Eclogae Geologicae Helvetiae, Zürich, vol. 36, No. 1, 1943, pp. 17-34.

In 1925-28 the Geological Commission of the Swiss Society for Nature Study made thermal measurements in the borehole near Tuggen, in the Linth Plain. The survey was carried out by means of air-bubble thermometers and mandrel thermometers. They were packed into steel containers, lowered into the borehole, and kept there 55.5 hours. Six stations were covered at diffe ent depths down to 1,300 meters, with varying reliability. The procedure, instruments, preparatory tests, different corrections, and the geological profile of the borehole are described. The observed temperatures ranged for different depths from 31.65° to 54.45° C. The geothermal gradients were: (1) From 0 meter down to 1,299.23 meters, 3.46° C./100 m.; and (2) from 647.33 down to 1,299.23 meters, 3.44° C./100 m. J. Königsberger has computed corrections for the effects of glaciers; the values are given. Eight other thermal surveys in Switzerland are briefly outlined. - V. S.

7. GEOCHEMICAL METHODS

Belluigi, Arnaldo. Determinazione della potenza delle coperture e profondita di alimentatori geologici metaniferi con misure gasometriche (The Determination of the Depth and Stratum-Thickness of Geological Accumulations of Methane by Means of Gasometric Measurements). Metano vol. 4, No. 11, 1942, p. 13. (See No. 7714 in this issue.)

7725. Merritt, J. W. Geochemistry as Aid to Successful Exploration. Oil Weekly, Houston, Tex., vol. 115, No. 6, 1944, pp. 35-38.

Geochemical surveys of oil deposits analyze surface samples for variou hydrocarbons. The sampling points are disposed in the field preferably in grid fashion; the spacing should not generally exceed 660 feet. The hydrocarbons used can be classed in three groups - solids, liquids, and gases; the latter two groups are more commonly employed. The analysis of samples can be volumetric, gravimetric, spectroscopic, photometric, etc. The results serve for mapping isochem contours. The contours have been found to form different hydrocarbon density patterns. In early surveys the halo pattern was developed; quite unexpectedly, the greatest concentration of hydrocarbons on the surface forms here a marginal band or halo about the underground productive area. In later surveys geochemists developed anothe pattern in which concentration increases from the periphery to the center o the productive area. Illuminating studies in three dimensions were made of density patterns in and about producing oil wells. Interpretation of densi patterns is difficult because the various productive horizons superposed upon one another under the ground all project their patterns to the surface V. S.

Generated on 2024-09-19 14:45 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7726. Tripp, R. M. Analytical and Experimental Data Concerning a Solid Hydrocarbon Survey of the Fort Collins Anticline. Geophysics, Menasha, Wis., vol. 9, No. 3, 1944, pp. 367-387.

An analysis is made of the properties of sediments and their derived products which pertain to the migration of gaseous hydrocarbons. From a thermodynamic consideration the zone of secondary mineralization is localized and the appearance of radioactive highs over structure is possibly explained. A distinction is made between the types of soil waxes, and an hypothesis is advanced to explain the origin of the petroleum derived waxes. The results of a soil wax survey of a producing structure are presented and discussed. No implication is intended regarding the general usefulness of the technique. - Author's abs.

7727. Zobell, C. E. The Influence of Bacterial Activity on Petroleum Deposits and Products (abs.). Tulsa Geol. Soc. Digest, Tulsa, Okla., vol. 12, 1943-44, p. 38.

The author suggests that bacteria and allied micro-organisms play an important role in the production and accumulation of oil. The various considerations supporting such view are indicated. The conclusion is drawn that the tendency of bacteria to oxidize volatile hydrocarbons in surface soil may provide an inexpensive and practical procedure for prospecting before more thorough geological investigation. - V. S.

8. UNCLASSIFIED METHODS AND TOPICS RELATED TO GEOPHYSICS

7728. Adams, J. E. Paleogeography and Petroleum Exploration. Jour. Sedimentary Petrol., Tulsa, Okla., vol. 13, No. 3, 1943, pp. 108-111.

Paleogeography in a broad way controls the deposition and distribution of source beds and reservoirs. The search for new deposits of petroleum is aided by the use of special paleogeographic maps. The term sulithogeography is introduced to cover distribution of favorable lithologic areas. Other types of maps that may be used show salinity, thickness of sands, paleogeology and paleotopography. All these maps can be combined with structural contour maps to show depositional and post-depositional dips. - Author's abs.

7729. Barnes, K. B. Core Analysis: Methods and Applications - A Summary. Oil and Gas Jour., Tulsa, Okla., vol. 43, No. 24, 1944, pp. 98-101.

Presents summary of the tests, procedures, and applications of core analysis. It deals with porosity, saturation, permeability, oil recovery, core sampling, construction of graphs, and interpretation. A bibliography is appended. - V. S.

Generated on 2024-09-19 14:43 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7730. Bartels, Julius. Statistik in der Geophyzik (Statistics in Geophysics). Ann. Hydrogr., Berlin, vol. 71, 1943, pp. 107-114.

The author discusses the applications of statistics to geophysics, meteorology, oceanography, etc. He deals mostly with graphic and numerical methods, periodicity, and spherical functions. Particular attention is devoted to geophysics. Statistical methods are here often applied to problems for which they are not suited. Such a use is deceptive. The various statistical techniques developed for different subject matters are specifically adapted in each case to satisfy intrinsic requirements. Only a few of these techniques have been directly adjusted to geophysical problems. The greatest difficulty lies in the variability of geophysical materials. The author gives numerous typical examples for showing correct and erroneous applications. Some literature on statistical periodicity is reviewed. - V. S.

7731. Borisov, A. A. The findings of the West-Siberian Expedition of the State Siberian Geological Trust (in Russian). Razvedka Nedr, Moscow, vol. 11, No. 6, 1941, p. 30.

A geophysical expedition was sent to western Siberia in 1939 under the sponsorship of the Government. Its purpose was primarily to outline the Paleozoic relief and to search for oil. The work consisted of gravimetric, seismic, magnetic, and electrical measurements. It covered mainly a zone about 100 km. wide between Cheliabinsk and Petropavlovsk. Farther north, there was also gravimetric and magnetic exploration in the Ob and Irtysh River Basins. In the Tavda district electrical surveys were made. The findings of the expedition are embodied in a large hypsometric map of the Paleozoic subsurface. On this map are indicated the localities offering a promise of oil. - V. S.

7732. Bowie, W. Surfaces of the Earth. Jour. Geol., Chicago, vol. 40, No. 8, 1932, pp. 739-744.

A general notion is given of the various surfaces of the earth, such as: The surface of the ground, the surface of the sea, and the mathematical surface of the earth as produced by an ellipsoid of rotation. Some details of the latter, of interest to geophysicists, are presented. The most accurate dimensions for the ellipsoid forming the surface of the earth were derived from geodetic data of the U. S. Coast and Geodetic Survey. - W. A.

7733. Bucher, W. H. The Stereographic Projection, a Handy Tool for the Practical Geologist. Jour. Geol., Chicago, vol. 52, No. 3, 1944, pp. 191-212.

Structural geology involves space relations. Therefore, its problems lend themselves particularly well to solution by the methods of stereographic projection. A number of problems are enumerated, such as finding

Generated on 2024-09-19 14:43 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

the apparent dip in a vertical plane cutting an inclined bed, the position in space of the line of intersection of two inclined planes, etc. To understand the nature of stereographic projection it is necessary to visualize the lower half of a sphere with the equatorial plane in horizontal position. Then a stereographic projection is produced by drawing straight lines from the upper pole through the points on the lower hemisphere and extending them to their intersections with a horizontal plane at any desired distance below the hemisphere. In the resulting projection every point on the plane represents a corresponding point on the hemisphere. Drawings illustrate the procedure. The method requires the use of a "stereonet" made by a projection of meridians and parallels. The geologist places a piece of transparent paper over this net and prepares on it his "stereogram". Step-by-step solutions of numerous problems are offered to illustrate the method; some of them involve rotation. In an appendix, D. J. Fisher has added suggestions for several simplified solutions. - V. S.

7734. Dobrin, M. B. Description of ESMWT Course in Petroleum Geophysics Conducted in Washington, D. C. Geophysics, Menasha, Wis., vol. 9, No. 4, 1944, pp. 560-562.

A course in petroleum geophysics was given by the author at George Washington University, Washington, D. C., during the spring and summer of 1944. It was a part of the Engineering, Science, and Management War Training Program sponsored by the U. S. Office of Education. The Government finances all such instruction. The subject matter of the course covered fundamentals of petroleum geology and of the gravitational, magnetic, seismic, electrical and geochemical methods of exploration. - V. S.

7735. Johnson, J. H. Paleontology, Petroleum, and the Search for Oil. Bull. Am. Assoc. Petrol. Geol., Tulsa, Okla., vol. 28, No. 7, 1944, pp. 902-908.

All of us, geologists, geophysicists, or paleontologists, are endeavoring to help win the war by finding new supplies of petroleum. Our task is difficult because in the United States all the easily discovered simple structural accumulations have been found. This paper briefly reviews the field of paleontology as utilized by the oil industry, and the relation of paleontology to petroleum geology and geophysics. The type of geological problems facing industry in its search for new oil is discussed. To solve these problems much research is needed and a through coordination of all personnel, geological, geophysical, and paleontological, into a smooth-working team. The problems of the future are too large and too complicated to be solved by individuals or single methods of attack. - Author's abs.

7736. Jung, Heinrich. Beispiele für die Anwendung von Anaglyphen-Raumbildern in der Geophysik (Examples for the Use of Anaglyphic Space Diagrams in Geophysics). Ztschr. Geophys., Braunschweig, vol. 17, 1942, pp. 291-308.

Generated on 2024-09-19 15:26 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

Some geophysical problems are difficult to visualize in space. The author chooses several examples of them to illustrate the use of helpful three-dimensional diagrams. General methods of construction of such spaci representations are described, and directions are given for interpreting them. - V. S.

7737. Kellum, L. B. Geologic History of Northern Mexico and Its Bearing on Petroleum Exploration. Bull. Am. Assoc. Petrol. Geol., Tulsa, Okl vol. 28, No. 3, 1944, pp. 301-325.

Buried platforms comparable with the Coahuila Peninsula of north-central Mexico are known to be present in several of the major down-warped areas in the central and coastal United States and beneath the coastal pla of eastern Mexico. It is believed that others may be present. The purpos of this paper is to point out certain criteria which ma, aid in their discov A series of paleogeographic maps has been compiled to show the geologic de velopment of Mexico during late Paleozoic and Mesozoic time. The strati-graphic section on the buried Coahuila Peninsula is in marked contrast to the deposits in the geosyncline on the south. This is due to the influenca of the underlying massif on sedimentation throughout a long period of geo-logic time. It indicates that facies of deposition may be used as a guide in locating buried positive elements in the subsurface. The influence of a buried massif on the structure of overlying strata is clearly demonstrat by the contrast between the relatively simple warping of Lower Cretaceous rocks over the Coahuila Peninsula and the tight, asymmetrical folding and overthrusting in the areas of the surrounding geosyncline. The physiograp of the mountain ranges is an expression of the lithologic succession and geologic structure comprising them. Regionally it reveals the same contra in underlying geology that marks the Coahuila Peninsula and the geosynclir The area where great buried platforms, comparable with the Coahuila Penin-sula, are likely to produce oil and gas in the future are the structurall down-warped provinces of the central United States and along the margins of the continent. - Author's abs.

7738. Kornfeld, J. A. Oil Search in the Eastern Gulf Region. World Pet New York, vol. 15, No. 6, 1944, pp. 27-34; also Mines Mag., Denver, Colo., vol. 34, No. 9, 1944, pp. 476-484.

The discovery of oil in the Everglades of southern Florida in Novemb 1943 has prompted wide exploration in the eastern Gulf region. The gravi meter is chiefly used; the reflection seismograph and the magnetometer ar also applied. The anomalies discovered are verified by core drilling. V areas in this region have never been explored geophysically and offer new possibilities. The author describes developments in numerous localities Alabama, Florida, Georgia, and Mississippi. The data cover geophysical s veying, wildcat activity, average drilling depth, production data, comple work, etc. during the last several years. Southern Mississippi is given particular attention. Tables and maps illustrate the text. - V. S.

Generated on 2024-09-19 15:21 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7739. Leibenson, L. S. Application of Variation Equation of Elasticity to the Solution of a Geomechanical Problem of the Earth's Deformation and Vibration (in Russian). Bull. Acad. Sci. U.R.S.S. (Izvestia), Ser. geograph. et geophys., Moscow, No. 5, 1942, pp. 196-204.

The paper investigates the main geomechanical problem of the earth's deformation by means of forces possessing a harmonic potential. The earth is assumed to be composed of noncontracting, gravitating substance; the original distribution of tensions is taken to be hydrostatic. The author adopts a new method of solution based on the variation equation of the theory of elasticity. This method permits a simple estimation of the effects of variable density and variable elasticity. At the end of the paper the new method is applied to the question of vibrations of the earth; an estimation of the effect of gravitation on the period is also given. - Author's abs.

7740. Oil. Salt Domes of the Gulf Coast Region. New Orleans, La., vol. 4, No. 4, 1944, pp. 29-30.

In May 1944 M. A. Hanna addressed the New Orleans Geological Society on the characteristics, growth, and modifications of salt domes in the Gulf Coast region. The region is covered with domes from the Rio Grande to the Alabama-Mississippi border. The typical dome cross section is a sequence of rock salt, anhydrite, gypsum, sometimes sulfur, and limestone caprock. The domes range in diameter from 1/2 to 8 miles, with a probable average width of about 3 miles. The vertical extent of domes is calculated to be, on the average, 28,000 feet on the Gulf coast and 42,000 feet in south Louisiana. Domes are derived from a deep-buried sedimentary salt layer, probably of Paleozoic age. The force causing the domes to rise from the original layer is not known. Once the salt has started to push upward, further growth can be caused by differential compaction. A dome continues to grow until the supply of salt is cut off or until an isostatic balance is reached. - V. S.

7741. Oil and Gas Journal. Oil Discovery in United States Stalled by Its Own Success. Tulsa, Okla., vol. 43, No. 15, 1944, p. 67.

W. E. Pratt considers that the most promising parts of the earth in which to search for petroleum are the Near and Middle East in the Old World; the environs of the Gulf of Mexico and the Caribbean Sea in the Western Hemisphere; the Netherlands and British East Indies in the Far East; and the land fringing the Artic Sea in North America, Europe, and Asia. Only the Russians have made much effort to explore the petroleum possibilities of the Artic. - V. S.

7742. Petroleo Interamericano. Glosario de los términos más comunmente usados en geología y geofísica. Ingles - Español; Español - Ingles. (Glossary of Terms More Commonly Used in Geology and Geophysics English - Spanish; Spanish - English). Tulsa, Okla., vol. 1, No. 5, 1944, pp. 113-136.

Generated on 2024-09-19 14:47 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

With the growth of the oil industry in Latin America there arises an urgent need for a standardized Spanish-English oil nomenclature. To meet this need, Petroleo Interamericano has undertaken to publish from time to time in its issues brief preliminary glossaries on different phases of the oil industry. These glossaries must be critically examined by oil men throughout South America, if a uniform Spanish terminology be established in all Latin-American republics. Petroleo Interamericano will welcome criticisms and suggestions. The present glossary on exploration has been prepared with the collaboration of the Colombian Petroleum Institute. - V.

7743. Ritzmann, O. F. Patents Vested in the Alien Property Custodian. Geophysics, Menasha, Wis., vol. 9, No. 3, 1944, pp. 388-401.

Some United States patents and the patent applications belonging to nationals of enemy and enemy-occupied countries have been vested by the United States Government in the Alien Property Custodian. A complete catalog, as well as separate lists in each class of the Patent Office classification, have been printed. These publications may be obtained from the off of the Alien Property Custodian, Chicago 3, Ill. The catalog contains over 25,000 entries and costs $7.00; the lists are available at nominal charge. In the present article the writer has listed from the catalog the patents that may interest geophysicists. He presents two groups: (1) List of United States patents pertaining to geophysics and vested in the Alien Property Custodian; and (2) United States patent-applications vested in Alien Property Custodian. Since the patent applications have not been previously available, the author includes brief abstracts of them. - V. S.

7744. Sawdon, W. A. Geophysics - Vanguard of South America's Future Oil Production. Petrol. Eng., Dallas, Tex., vol. 16, No. 1, 1944, p 120

Extensive geophysical exploration is under way in South American countries, in preparation for post-war drilling; apparently, geophysical activities have never been so great as they are now. Most surveys are seismogra the gravimeter and magnetometer are also employed. Information on the loc ities surveyed is not always reliable. The greatest amount of work is see ingly done in Colombia, particularly in the northern part, the llanos regi and near the mountains southeast of Bogota. In Venezuela the areas explor lie in the eastern part, west and south of the Orinoco Basin, and as far we ward as the Barinas area. In Brazil exploration is made in the Parana are south and west of the Amazon Delta, along the northeastern coast, and in the extreme west. In Argentina the Government carries on continuous geophysical work through the Y.P.F. Some surveying is also done in Chile. -

7745. Terrestrial Magnetism and Atmospheric Electricity. Note: Sever Institute of Geophysical Technology. T.M.A.E., Baltimore, Md., vol. 49, No. 2, 1944, p. 136.

Generated on 2024-09-19 14:47 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

A new geophysical school has been founded at St. Louis University on the award of H. E. Sever. It is called the Sever Institute of Geophysical Technology. The cirriculum will be devoted exclusively to geophysics, with a view to replacing war-depleted reserves. The proposed courses cover scientific exploration for oil and minerals, meteorology, applied electronics, and radio-communication engineering. - V. S.

7746. van Tuyl, F. M. Progress in Petroleum Exploration. Petroleo Interamericano, Printed in Spanish and English, Tulsa, Okla., vol. 1, No. 6, 1944, pp. 76-80; also Mines Mag., Denver, Colo., vol. 34, No. 9, 1944, pp. 459-461, 507.

The trends and problems created in petroleum exploration by the war are discussed. The role of the new Pan-American Institute of Mining Engineering and Geology at Santiago, Chile, is outlined. Several new and improved techniques are indicated, such as a new seismic refraction method, the trimetron method of aerial reconnaissance, a new electric pilot, the self-potential dipmeter, portable slim-hole drilling equipment, and a fluorograph for the detection of hydrocarbon in the soil. - V. S.

7747. Weller, J. M. Outline of Chinese Geology. Bull, Am. Assoc. Petrol. Geol., Tulsa, Okla., vol. 28, No. 10, 1944, pp. 1417-1429.

The geological characteristics of China proper, eastern and central Asia, and the coastal region are described. The structural framework of Greater China consists of three positive areas and the geosynclines that separate and enclose them; these are compared with analogous features of eastern North American. There are five large sedimentary basins - two in Chinese Turkestan, one in Tibet, and two in western and northern China proper. Most parts of China are intensely folded and faulted. - V. S.

9. NEW PUBLICATIONS

7748. Agapeyeff, Alexander de, and Hadfield, E. C. R. Maps. Meridian Books, London, Oxford University Press, 1942, 140 pp. Price, $1.75.

This book deals mainly with map making. It describes in popular language the principles, instruments, and techniques involved. (1) Distance: Scale, horizontal equivalent, accuracy required in surveying, calculation of area. (2) Direction: Magnetic variation, measuring direction, bearing and back bearing, types of compass, protractor, theodolite, types of traverse, errors of closure, intersection, resection, etc. (3) Height: Spot heights, contours, form lines, hill shading, the clinometer, leveling, aneroid barometer, etc. (4) Mapping large tracts of country: Triangulation and insertion of details, use of the plane table, etc. (5) Map projection: Latitude and longitude, effect of alteration of scale, orthomorphic shape projection, homolographic projections, distortion due to shearing, allowances for projection, geometrical projections, nongeometrical projections, etc.

Generated on 2024-09-19 14:47 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

(6) Characteristics of the commoner projections: Azimuthal or zenithal pr jections, cylindrical projections, conical projections, etc. Drawings and maps illustrate the text. - V. S.

7749. Bishopp, D. W. A Short Review of Irish Mineral Resources. Geol. Survey of Ireland. Emergency Period, Pamph. 1, Dublin, Stationery Office, 1943, 20 pp.

In discussing Irish mineral resources the author briefly mentions var ous geophysical methods and applications. Ireland has been geologically mapped on a scale of 6 inches to the mile, so that little probability exis of further discoveries from the surface. But large areas are covered by b or glacial drift. This unseen territory is now explored by geophysical methods. The work is carried out under the direction of the Geological Survey in conjunction with the Emergency Research Bureau; it is the first such national undertaking in Ireland. The results so far obtained in County Wicklow are encouraging. - V. S.

7750. Daly, R. A. The Floor of the Ocean. Chapel Hill, N. C., Universit of North Carolina Press, 1942, 177 pp. Price, $2.50.

This volume brings to date the existing knowledge of the ocean floor. The determining methods and the results obtained are described. The conte cover the composition and thickness of the suboceanic crust and the nature the underlying substratum; the islands, mountain structures, and oceanic deeps that diversify the relief of the deep-sea floor; and the submerged terraces and canyons of the continental slope. The contributions of the author are included. - V. S.

7751. Fedukovich, V. S. Physical Methods of Geophysical Prospecting (in Ukrainian). Tekhnichne Vidavnitstvo, Kharkov, 1932, 184 pp. Price, Rbl. 1.50.

A description is given of the methods of geophysical prospecting - m netic, gravitational, seismic, electrical, radioactive, and geothermal. -

7752. Madelung, Erwin. Die mathematischen Hilfsmittel des Physikers (Ma matical Tools for the Physicist). New York, Dover Publications, re- producing Julius Springer's latest 1936 ed., 400 pp., 25 ill. Price $3.50.

This reference book contains 4,000 advanced equations, formulas, and theorems of mathematics and mathematical physics. The text covers functi theory, algebra, matrixes, series, group theory, differential and integra equations, transformation theory, vector analysis, calculus of variations theory of probability, etc. The collection is supplemented by the funda- mental concepts, definitions, and statements of the basic equations of th

Generated on 2024-09-19 14:39 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

theory of relativity, thermodynamics, and quantum theory. Advanced mathematical methods for specific problems in applied and theoretical physics are included. The formulas are expressed in internationally accepted symbols. A German-English glossary is appended. - V. S.

7753. Mathematical Tables Project, Work Projects Administration of the Federal Works Agency, U. S. A. Tables of the Bessel Functions $J_o(z)$ and $J_1(z)$ for Complex Arguments. Conducted under the Sponsorship of the National Bureau of Standards, A. N. Lowman, Technical Director. New York, Columbia University Press, 1943, 403 pp. Price, $5.00.

Bessel functions are encountered in certain problems of potential, heat conduction, wave motion, etc. They have seldom been tabulated for complex arguments. In the present volume, the functions $J_o(z)$ and $J_1(z)$ are tabulated for argument points defined in polar coordinates. Along each of the rays $\varphi = 0^o, 5^o, \ldots 90^o$, 10-place values of the real and imaginary parts of $J_o(z)$ and $J_1(z)$ are given for moduli ranging from 0 to 10 at intervals of 0.01. A table of five-point Lagrangian interpolation coefficients is included. Introductory remarks deal with applications and properties of Bessel functions, methods of computing $J_o(z)$ and $J_1(z)$, preparation of manuscript, interpolation, etc. A bibliography is appended. (The various tables prepared by the Mathematical Tables Project and made available through the National Bureau of Standards are listed in the issues of the Journal of Research of this bureau, on the back cover). - V. S.

7754. Meisser, Otto. Praktische Geophysik für Lehre, Forschung, und Praxis (Practical Geophysics for Study, Research, and Practice). T. Steinkopff, Dresden, 1943, 368 pp. Price, 37.50 RM.

This text book presents geophysical subject matter as required by the German curriculum for geophysics students, effective November 1941. The contents cover the gravimetric, magnetic, seismic, electrical, thermal, and radioactive methods, their apparatus and techniques, and related subjects. Solid bodies in the earth are treated comprehensively, while water bodies and meteorology are handled in more cursory fashion. The emphasis is placed on the experimental side, and many experimental results are cited. The theoretical side is correspondingly reduced. - V. S.

7755. Oliveira, A. I. de, and Leonardos, O. H. Geologia do Brazil (Geology of Brazil). Servico de Informacao Agricola, Rio de Janeiro, Sér. Didática 2, 2d ed., 1943, 813 pp. Price, $3.00

In this volume the authors have brought together all that is known of the geology of Brazil. Chapter 1 reviews the history of geologic work. Succeeding chapters are devoted to geological eras. In the case of each era there are described paleogeography, climate, distinctive types of life, and the geology of each important area of outcrop. The text is illustrated with numerous plates and maps. - C. O. Dunbar, Am. Jour. Sci., vol. 242, No. 6, 1944, p. 342; condensed by V. S.

Generated on 2024-09-19 14:43 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

10. PATENTS

7756. Method and Apparatus for Seismic Underground Prospecting; Raymond Maillet, Paris (16E), France. Vested in the Alien Property Custodian. U. S. Patent Application A.P.C. 254,743, published May 18, 1943.

Claims: "The object of the present invention is to take advantage of the property of the reflected waves of being relatively the richer in low frequencies as they come from the deepest mirrors. This result is obtained according to the present invention, by varying the frequency curve of the amplifiers as a function of the time having elapsed since the time of emission, in such manner as to permit the passage of components which are the graver the more considerable the time thus elapsed. With this system, at the beginning of the experiment, the cutting-off frequency or the passing band can be chosen relatively high for insuring a good elimination of the superficial waves. This cutting-off frequency or this passing band is then automatically varied and generally lowered gradually along the frequency scale, so as to permit a good recording of the waves which have been refrected from the deep mirrors, the superficial waves having then disappeared or, at least, having but reduced amplitudes which permit this lowering. According to another feature of the invention I combine this characteristic with the automatic variation of sensitiveness as a function of time."

7757. Coring Tool; Marcel Schlumberger, Paris, France. Vested in the Alien Property Custodian. U. S. Patent Application A.P.C. 271,524, published May 25, 1943.

The invention relates to a new and improved coring tool which is adapted to be projected into a formation by means of a special form of gun lowered to the level of the formation, for extracting a core therefrom. The coring tool comprises a hollow member, preferably tubular in shape, having a closure member therein which is secured against forward motion within the hollow member but which is capable of being moved rearwardly out of the hollow member by the application of force. The forces developed by the explosion of the charge in the gun are directed against the rear face of the closure member imparting the requisite high velocity to the tool.

7758. Gun Perforator; Marcel Schlumberger, Paris, France. Vested in the Alien Property Custodian. U. S. Patent Application A.P.C. 315,157, published May 11, 1943.

The present invention relates to new and improved apparatus for perforating metallic casings. The apparatus comprises an assembly of similar units each of which is provided with a plurality of gun bores and cartridge chambers therein. Each unit includes igniting means for each gun therein adapted to be automatically interconnected. The apparatus is so designed that when the units are assembled, at least one continuous ignition path extends through the perforator. The powder in the successive cartridges is ignited by electric means. The guns lie in different horizontal planes and are angularly spaced about the longitudinal axis of the apparatus.

Generated on 2024-09-19 14:48 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7759. Thermometer for Deep Well Measurements; Oscar Martienssen, Kiel, Germany. Vested in the Alien Property Custodian. U. S. Patent Application A.P.C. 342,488, published May 4, 1943.

In deep wells which are filled with water or a heavy flushing liquid, heretofore temperature measurements have been carried out with maximum or Kipp thermometers, if it was a matter of an individual measurement, or with electric resistance thermometers, if continuous measurements along the length of the well were required. For the latter measurements the usual thermometers constructed with metal wires - iron, nickel, or platinum - were used, the resistance of which was only increased by 1 percent for a rising temperature of about 3° C. According to the present invention the thermometer consists of a semi-conductor having electronic conduction, such as a uranium dioxide or manganese-titanium-spinel resistor, such as is used as a series resistance in radio receiving sets under the name Urdox resistor. These resistors can be produced in rod or tube form of not much more than 1 mm. diameter and 10 mm. length, with a resistance as desired between 20,000 and 100,000 ohms at 10° C. The resistance of such rods increases by several percent with an increase of temperature of 1° C. This high resistance, coupled with a high temperature coefficient, makes it possible to work with a single conductor and an earth return, because their resistance and change in resistance is negligible. At the same time the dimensioning of the protective housing can be made smaller and lighter, so that the thermometer almost instantly assumes the temperature of its surroundings.

7760. Gravity Meter; Anton Graf, Berlin-Steglitz, Germany. Vested in the Alien Property Custodian. U. S. Patent Application A.P.C. 377,395, published May 25, 1943.

One of the principal considerations in the construction of optic-electric gravity meters is that of eliminating any temperature influence from the heat producing sources of light upon the extremely temperature-sensitive parts of the instrument, that is, the photocells and the suspension spring. According to the present invention, protection against temperature influences is facilitated by arranging the photocells back to back in the interior of the instrument so as to be capable of exposure to sources of light arranged outside of said instrument. A further point to be considered is that the photocells in the interior of the instrument, and particularly the diaphragms between these and the sources of light, are easily and accurately adjustable. For this purpose they are arranged in such manner that a perforated diaphragm is secured so as to be turnable and vertically displaceable in front of each photocell, a similarly perforated second diaphragm being suspended in front of said first diaphragms.

7761. Means for Measuring Magnetic Fields. Gustav Barth, Berlin, Germany; vested in the Alien Property Custodian. U. S. Patent Application A.P.C. 402,530, published May 18, 1943.

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

I.C. 7310

This invention relates to means for determining the magnitude of a mag netic field, in particular the field strength and the direction of the line of force of the field at a point. A magnetic field-measuring system is pro vided with two magnetizable cores or bodies and with two windings disposed the magnetizable cores respectively, an energizing circuit being so connect with these windings as to produce in the two cores a periodically variable flux which in one body has a direction opposite to that of the variable flu in the other body. A common measuring or indicating instrument is connecte with both windings so as to respond to the differential effect caused by th resultant magnetization of the two bodies respectively. (A.P.C. 181,719 referred to in the text of the present application is the same as U. S. Pat 1,679,510.)

7762. Cartridges; Marcel Schlumberger, St. Gaudens, Haute Garonne, France. Vested in the Alien Property Custodian. U. S. Patent Application A.P. 403,648, published June 1, 1943.

This patent is a division of a patent for Gun Perforator, Serial No. A.P.C. 315,157. It provides a new and improved cartridge for use in well casing perforating apparatus of the above character, which is adapted to comprise a component part of a continuous ignition path extending through the perforating apparatus and including similar cartridges in other units thereof.

7763. Gun-Firing Apparatus; Marcel Schlumberger, St. Gaudens, Haute Garon France. Vested in the Alien Property Custodian. U. S. Patent Application A.P.C. 403,649, published June 1, 1943.

This patent is a division of a patent for Gun Perforator, Serial No. A.P.C. 315,157. It relates to apparatus for controlling the firing of a plurality of explosive charges in a body such as the said perforator. New and improved switching means are provided for connecting each of the igni- tion circuits of the perforator selectively to a single conductor in the supporting cable. Thus, a monoconductor cable may be used for carrying ou perforating operations in a borehole.

7764. Well-Casing Perforator; Marcel Schlumberger, St. Gaudens, Haute Gar France. Vested in the Alien Property Custodian. U. S. Patent Applic A.P.C. 403,650, published June 1, 1943.

This patent is a division of a patent for Gun Perforator, Serial No. A.P.C. 315,157. It relates to a similar well-casing perforating apparatus in which the units are so designed that when assembled, the axes of the gu therein lie along a helix about the periphery of the perforator. New and improved means are provided for firing the guns in successive order. A gi interval of time elapses between the firing of each adjacent gun. Means a also provided for indicating at the surface of the earth that a gun has be fired.

Generated on 2024-09-19 14:40 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

7765. Apparatus for Detecting Underground-Lying Metallic Objects; Henri Chireix, Paris, France. Vested in the Alien Property Custodian. U. S. Patent Application A.P.C. 419,545, published June 1, 1943.

The present invention provides a portable apparatus for detecting underground metallic objects such as shells or mines. The construction provides a closed circuit comprising a loop and a condenser in which flows an alternating current of a high and stable frequency. The magnetic field of the loop induces in the underground object eddy currents which produce a counter-field, thus slightly modifying the characteristics of the circuit. The modification is indicated by the apparatus.

7766. Apparatus for Measuring Magnetic Fields; R. D. Wyckoff, Pittsburgh, Pa., assignor to Gulf Research & Development Co., Pittsburgh, Pa., a corporation of Delaware. U. S. Patent 2,334,593, issued November 16, 1943.

An apparatus for measuring magnetic fields comprising an element of magnetizable material whose permeability is a function of stress and supported to be free to vibrate, piezo-electric crystal means on said element adapted upon energization to vibrate said element to cause periodic stresses therein, means for applying an alternating current to said crystal means whereby to vibrate the element, with consequent periodic variation of the flux induced in said element by the ambient field, means operated by said varying flux for producing an alternating current corresponding thereto, and exhibiting means for said current. - Claims allowed, 8.

7767. Coupling Circuit; H. M. Evjen and W. B. Lewis, Houston, Tex., assignors to Nordel Corporation, Houston, Tex., a corporation of Delaware. U. S. Patent 2,342,628, issued February 29, 1944.

A coupling circuit for coupling a primary circuit carrying direct current or low-frequency alternating current to a D. C. secondary circuit for supplying to said secondary circuit a voltage drop proportional to the primary current for making precision measurements, said coupling circuit comprising a transformer having a magnetic circuit and primary and secondary windings coupled thereby, means connecting said primary winding to be energized from said primary circuit to produce a flux in said magnetic circuit proportional to said energization, means associated with said magnetic circuit to vary the reluctance thereof for effecting corresponding changes in flux, control means actuating said last means cyclically at a controlled frequency so as to produce an alternating current in the secondary winding having a frequency determined by the frequency of variation of said flux and an amplitude varying as a function of the amplitude of the primary current and of the rate of variation of said flux, and a transmission channel connecting said secondary to supply a voltage drop to said secondary circuit, said channel including a filter network having frequency transmission characteristics to compensate for changes in current intensity in said secondary winding due to variations in speed of operation of said control means, so that the voltage drop supplied by said channel to said secondary circuit is

Generated on 2024-09-19 14:41 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

unaffected by changes in speed of operation of said control means and is a function only of the current flowing in the primary circuit. - Claims allowed, 5.

7768. Coupling Circuit; H. M. Evjen and W. B. Lewis, Houston, Tex., assig to Nordel Corporation, Houston, Tex., a corporation of Delaware. U. S Patent 2,342,629, issued February 29, 1944.

A coupling circuit for coupling a primary circuit carrying direct cur rent or low-frequency alternating current to a secondary circuit for suppl ing to said secondary circuit a voltage drop proportional to the current flowing in said primary circuit for making precision measurements, said coupling circuit comprising a primary coil coupled magnetically to a secon ary coil, means connecting said primary coil to be continually energized from the said primary circuit by an amount proportional to the current flo ing therein so as to set up a flux through said secondary coil proportione to said energization, means rotating said primary coil with respect to sai secondary coil to vary periodically the flux through said secondary coil t set up an alternating potential across said secondary coil whose frequency is the same as the frequency of said variations of flux and whose amplitud is a function of the primary current and of the rate of variation of said flux, and a transmission channel connecting said secondary coil to supply a voltage drop to said secondary circuit, said channel including a filter network having frequency transmission characteristics to compensate for changes in current intensity in said secondary winding due to variation in speed of ratation of said primary coil, so that the current passed by said filter network is unaffected by changes in speed of rotation of said coil and is a function only of the current flowing in said primary circuit. - Claims allowed, 5.

7769. Method and Apparatus for Permeability Measurements; G. L. Hassler, Berkeley, Calif., assignor to Shell Development Co., San Francisco, Calif., a corporation of Delaware. U. S. Patent 2,345,935 issued April 4, 1944.

In a method for determining the permeability of a porous body to flu flow, the steps of saturating said body with said fluid to a predetermine degree of saturation, circulating said fluid through said body in a close cricuit while maintaining said degree of saturation, measuring the rate o flow of said fluid, measuring the difference of pressure existing during said flow between points in said body spaced from each other in the direc tion of the line of flow of said fluid, changing the degree of saturation of said body, and repeating said flow and pressure measurements for said second degree of saturation. - Claims allowed, 7.

7770. Device for Measuring Extremely Small Angles; H. B. Maris, Riverdal Md. U. S. Patent 2,347,702, issued May 2, 1944.

Generated on 2024-09-19 14:41 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

Means for measuring extremely small angles, comprising means bearing a first plane reflecting surface, means bearing a second plane reflecting surface, means normally supporting said first and second surface bearing means with their reflecting surfaces in inclined face-to-face relation and supporting said second surface bearing means for relative movement with respect to said first surface bearing means about an axis normal to the line of intersection of the planes containing said normally inclined surfaces, means for directing a substantially parallel beam of light from a point behind said first surface past an edge of said first surface at its end remote from said line on to said second surface, said beam of light lying in a plane normal to said surfaces prior to relative movement thereof and incident on said second surface at such an angle that it will be reflected a plurality of times between said surfaces and after having been so reflected will emerge at substantially its point of incidence, whereby relative movement of said surfaces about said axis will cause said emerging beam to swing through an angle depending on the magnitude of relative movement of said surfaces and the number of reflections between said surfaces. - Claims allowed, 12.

7771. Method of Soil Analysis for Location of Oil Deposits; A. O. Beckman, Altadena, Calif., assignor to American Geochemical Corporation, Long Beach, Calif., a corporation of California. U. S. Patent 2,348,103, issued May 2, 1944.

A method of geochemical survey for petroleum deposits, which comprises taking samples of soil at spaced intervals over the area to be surveyed, determining the sulfide content of said soil samples, and determining the location of petroleum deposits by selecting the significant high-sulfide values and correlating the same with reference to the locations at which samples yielding such significant high values were obtained. - Claims allowed, 6.

7772. Magnetic Seismometer; O. S. Petty, San Antonio, Tex. U. S. Patent 2,348,225, issued May 9, 1944.

A magnetic seismometer having, in combination, a tubular casing, an armature fixed coaxially therein, a steady mass mounted in the casing and for movement relative to the casing and armature, said steady mass comprising only a permanent magnet, pole pieces therefor and a coil, and diaphragm springs connecting said relatively movable parts, said springs having different natural frequencies of vibration. - Claims allowed, 7.

7773. Apparatus for Recording Wave Form Signals; Lorenzo Manzanera, San Antonio, Tex., assignor to O. S. Petty, San Antonio, Tex. U. S. Patent 2,348,401, issued May 9, 1944.

In apparatus for the multiple recording of seismic signals, means for feeding a sensitized strip in the direction of the length thereof, means to record on said strip a plurality of traces extending lengthwise of the strip,

Generated on 2024-09-19 14:46 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

and timing mechanism for recording on said strip a succession of transvers lines representing equal time intervals with certain of said lines intersecting all of said traces and with the major number of said lines, dispos intermediate said first-named lines, intersecting only those traces immedi ately adjacent each edge of the strip. - Claimes allowed, 6.

7774. Seismic Surveying; J. O. Parr, Jr., San Antonio, Tex., assignor to O. S. Petty, San Antonio, Tex. U. S. Patent 2,348,409, issued May 9, 1944.

In apparatus for use in seismic surveying, the combination with a plu rality of seismometers, of separate amplifying and recording devices assoc ated therewith for separately recording energy representative of earlier arriving seismic waves, means for combining the signal energy from at leas two of said seismometers and for delivering the combined energy to one of said recording devices, means operable on the arrival of seismic energy at that seismometer which is more remote from the source of the seismic disturbance for initiating operation of said first named means and for thereafter varying with time the extent to which such energy is combined by sai first named means. - Claims allowed, 9.

7775. Method for Correlating Seismographic Curves; O. S. Petty, San Anton Tex. U. S. Patent 2,348,411, issued May 9, 1944.

In a method of geophysical exploration wherein a detonation is set of at a point in the earth's surface, the resulting seismic wave impulses re corded on seismograms, at one or more stations spaced from the point of detonation, in the form of seismographic curves, plotted across time-inte val lines the spacing of which is either nonuniform or according to diffe ent scales of measurement, or subject to both such disconformities, and th several seismographic curves correlated: The steps of successively trans cribing two or more of such curves onto a common surface having uniformly spaced time-interval indicia inscribed thereon, each of said curves being transcribed section by section, a section being the portion of the curve which lies between adjacent time-interval lines, each point on each secti of each transcribed curve occupying the same relative position with respe to the bounding time-interval indicia on said common surface that the cor sponding point of the original curve occupied relative to the adjacent time-interval lines on the original seismogram from which said curve was transcribed. - Claims allowed, 7.

7776. Method for Determining Permeability; J. A. Lewis, Dallas, Tex., assignor to Core Laboratories, Inc., Dallas, Tex., a corporation of Delaware. U. S. Patent 2,348,985, issued May 16, 1944.

The method of measuring the permeability of a permeable porous mater comprising the steps of supplying fluid under pressure to a predetermined restricted area of an approximately plane unrestricted surface of a sampl

Generated on 2024-09-19 14:46 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

of said material, said sample being sufficiently large with respect to said predetermined area that substantially all of the fluid entering said surface leaves said sample through the same surface at which it enters said sample but outside said restricted area whereby accurate preshaping of said sample and mounting of said sample in a fluid-tight mounting is rendered unnecessary, measuring the flow of fluid to said sample, measuring the fluid pressure of the fluid entering said surface of said sample, and correlating said two measurements to obtain the value of the permeability of said sample. - Claims allowed, 4.

7777. Sensitivity Control for Seismic Recording; Eugen Merten, Houston, Tex., assignor to Shell Development Co., San Francisco, Calif., a corporation of Delaware. U. S. Patent 2,349,186, issued May 16, 1944.

In a seismograph system comprising in circuit a detector adapted to generate electric impulses, an amplifier adapted to amplify said impulses, and a recorder adapted to record said impulses, a variable resistance shunting said circuit between the detector and the amplifier, time-responsive means for changing the value of said resistance between an initial and a final value during the period of recording of said impulses, and means responsive to the magnitude of the impulses originating in the detector for varying the rate of change of said resistance during said period of recording. - Claims allowed, 6.

7778. Well-Logging Instrument; S. A. Scherbatskoy, Gilbert Swift, R. E. Fearon, and Jacob Neufeld, Tulsa, Okla., assignors to Well Surveys, Inc., Tulsa, Okla., a corporation of Delaware. U. S. Patent 2,349,225, issued May 16, 1944.

Apparatus for well surveying that comprises an instrument adapted to be lowered into a well, a cable for supporting said instrument in the well and connecting it electrically to surface equipment, surface equipment responsive to measurements made by said instrument and a recorder operated by said surface equipment, the instrument in the well including an ionization chamber responsive to radioactive radiations, connected into a null system circuit the balance of which is adapted to be adjusted by the surface equipment, and means for sending signals of a plurality of frequencies to the surface for indicating whether or not the null system is in balance and if not, the direction of unbalance. - Claims allowed, 21.

7779. Gas Detection; R. L. Doan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware. U. S. Patent 2,349,250, issued May 23, 1944.

The method of analyzing soil gas for hydrocarbons heavier than methane in the presence of methane contained in the soil gas which comprises passing the soil gas into a vessel into contact with a filament in the vessel, cutting off all flow of gas to said vessel and allowing turbulence of the gas

Generated on 2024-09-19 14:45 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

in the vessel to subside, thereafter heating the filament to a temperature in the range of 900° F. to 1,250° F. by passage of electric current therethrough, and determining the quantity of hydrocarbons heavier than methane present in the soil gas by observing the rate of combustion thereof as evidenced by changes in the electrical resistance of the filament due to heat liberated by combustion of hydrocarbons heavier than methane. - Claims allowed, 3.

7780. Method for Geophysical Prospecting; C. A. Moon, Caracas, Venezuela, assignor to Socony-Vacuum Oil Co., Inc., New York, N. Y., a corporation of New York. U. S. Patent 2,349,366, issued May 23, 1944.

Method of simultaneously drilling and prospecting a well bore that comprises the following sequence of operations: Partially withdrawing the drill string from operative position within the well bore; placing a prospecting instrument of a type capable of measuring radiations which will pass through the drill stem within the partially withdrawn drill stem near the drill bit; returning the drill string to its original position at a measured rate of movement; removing the prospecting instrument from the drill stem; and correlating indications from the prospecting instrument with measurements of movement of the drill string to obtain indications of the character of formations traversed by the well bore. - Claims allowed, 9.

7781. Oil Prospecting Method; M. S. Taggart, Jr., Houston, Tex., assignor to Standard Oil Development Co., a corporation of Delaware. U. S. Patent 2,349,472, issued May 23, 1944.

A method for prospecting for petroleum deposits which comprises subjecting samples of the surface soil from spaced points in the area under investigation to the action of hydrocarbon gas in a sealed zone and determining the amount of the hydrocarbon gas taken up by the individual soil samples. - Claims allowed, 10.

7782. Well-Logging Method and Device; R. E. Fearon, Tulsa, Okla., assignor to Well Surveys, Inc., Tulsa, Okla., a corporation of Delaware. U. S. Patent 2,349,712, issued May 23, 1944.

The method of determining the nature of formations penetrated by a drill hole which comprises inserting in the drill hole a neutron-emitting source and measuring gamma-ray radiations from the formations as influenced by the said neutron-emitting source at different depths therein. - Claims allowed

7783. Method and Apparatus for Geophysical Exploration; Bruno Pontecorvo, Tulsa, Okla., assignor to Well Surveys, Inc., Tulsa, Okla., a corporation of Delaware. U. S. Patent 2,349,753, issued May 23, 1944.

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

A method of geophysical prospecting that comprises discriminating between radiations of varying energy that comprises utilizing said radiations to form beta radiations, detecting said beta radiations, causing said detected beta radiations to impinge upon a partition, detecting the beta radiations that are able to pass through said partition and comparing the results of the detections. - Claims allowed, 18.

7784. Borehole Logging Apparatus; G. A. Smith, Philadelphia, Pa., assignor to Sperry-Sun Well Surveying Co., Philadelphia, Pa., a corporation of Delaware. U. S. Patent 2,350,371, issued June 6, 1944.

Borehole logging apparatus comprising means for generating acoustic waves in strata surrounding a borehole, means comprising amplifying feedback devices forming, with said generating means and the strata, a system providing sustained oscillations having at least one substantial sinusoidal component, said system having variations in its operating characteristics depending upon the strata, said feed back devices being frequency-selective to sustain oscillations only of significant character, and means for indicating the variations of said characteristics with the strata. - Claims allowed, 8.

7785. Magnetic Direction Indicating Instrument; Shelley Krasnow, New York, N. Y., and J. M. S. Kaufman, Washington, D. C. U. S. Patent 2,350,402, issued June 6, 1944.

In a magnetic compass for indicating the direction of the magnetic meridian, a moving dial supported so as to be rotatable in a substantially horizontal plane and to point in the direction of the magnetic meridian, a plurality of magnetic elements affixed to the said moving system so as to cause the orientation thereof, the said magnetic elements being rigidly interconnected to form an integer, the said integer being movable relative to the remainder of the moving system to permit adjustment of the magnetic elements relative to the moving system, and clamping means to clamp the integer containing the magnetic elements after adjustment has been made, the said magnetic elements being in the form of tapered members, being tapered in both the horizontal and vertical planes, and having their enlarged portions nearest to the center of rotation, and their smallest portions remote from the center of rotation, the said disposition serving to reduce the moment of inertia of the magnets about the center of rotation and further serving to cause a minimum of disturbance in the fluid in which the magnets are immersed when rotation takes place. - Claims allowed, 2.

Generated on 2024-09-19 14:43 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

INDEX

(The figure in parentheses refers to the class in which the entry stands; see list in table of contents.)

	Abstract
Adams, J. E. (8)	7728
Agapeyeff, A. de (9)	7748
Angenheister, G. (3)	7673
Barnes, K. B. (8)	7729
Barsch, O. (1)	7644
Bartels, Julius (8)	7730
Barth, Gustav (10)	7761
Beacham, C. C. (4)	7712
Beckman, A. O. (10)	7771
Beers, R. F. (5)	7713
Belluigi, Arnaldo (5, 7)	7714
Bernstein, Arthur (2)	7659
Biot, M. A. (3)	7674
Bishopp, D. W. (9)	7749
Bodle, R. R. (3)	7675
Borisov, A. A. (8)	7731
Bowie, W. (8)	7732
Bucher, W. H. (8)	7733
Bulashevich, Iu. P. (4)	7700
Bullard, E. C. (1)	7645
Bullen, K. E. (3)	7685
Bureau of Mines, U. S. A. (3)	7676
Calfas, P. (4)	7701
Chella, Morio (1)	7646
Chireix, Henri (10)	7765
Coulomb, Jean (2)	7660
Daly, J. W. (3)	7677
Daly, R. A. (9)	7750
Doan, R. L. (10)	7779
Dobrin, M. B. (8)	7734
Ebert, A. (4)	7702
Ehrenhaft, Felix (2)	7661
Evans, R. D. (5)	7715
Evjen, H. M. (10)	7767, 7768
Fisher, N. H. (3)	7678
Fitzgerald, P. E. (4)	7703
Galmarini, A. G. (2)	7662
Gershanik, Simon (3)	7679

Generated on 2024-09-19 14:49 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

Goodman, Clark (5) 7713, 7715
Goudey, Raoul (1) 7647
Goverova, L. A. (1) 7648
Graf, Anton (10) 7760
Grosskopf, J. (4) 7704
Gutenberg, Beno (3) 7680, 7681
Guyod, Hubert (4) 7705

Haalck, H. (1) 7649
Hadfield, E. C. R. (8) 7748
Hassler, G. L. (10) 7769
Hayes, R. C. (3) 7682
Henderson, J. T. (3) 7683
Hersey, J. B. (1) 7650
Hodgson, E. A. (3) 7684
Horton, C. W. (1) 7651

Jeffreys, H. H. (3) 7685
Johnson, J. H. (8) 7735
Johnston, H. F. (2) 7663
Jung, Heinrich (8) 7736
Jung, Karl (1) 7652

Keevil, N. B. (5) 7716
Kellum, L. B. (8) 7737
Kendall, J. T. (2) 7664
Khlopin, V. G. (5) 7717
Koridalin, E. A. (3) 7686
Kornfeld, J. A. (8) 7738
Kraskovsky, S. A. (6) 7723
Krasnow, Shelley (10) 7785

Landes, K. K. (4) 7706
Larsen, E. S. (5) 7716
Lauterbach, Robert (2) 7665
Leibenson, L. S. (8) 7739
Lewis, J. A. (10) 7776
Lewis, W. B. (10) 7767, 7768
Lin, S. T. (2) 7671
Livingston, Penn (4) 7710

Madelung, Erwin (9) 7752
Maillet, Raymond (10) 7756
Malamphy, M. C. (1, 2) 7653
Manzanera, Lorenzo (10) 7773
Maris, H. B. (10) 7770
Martienssen, Oscar (10) 7759
Martin, H. (3) 7687

Generated on 2024-09-19 14:41 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

Masarskii, S. I. (3) 7686, 7688
Mathematical Tables Project, WPA, U. S. A. (9) 7753
Maurin, Charles (2) 7666
Maxwell, C. T. (5) 7718
Meisser, Otto (9) 7754
Merritt, J. W. (7) 7725
Merten, Eugen (10) 7777
Modriniak, N. (2) 7667
Montandon, Frederic (3) 7689
Moon, C. A. (10) 7780
Moore, R. W. (4) 7707
Mühlberg, Max (6) 7724
Müller, Max (4) 7708

Neufeld, Jacob (10) 7778
Niemczyk, Oskar (1) 7654

Oil, New Orleans, La. (8) 7740
Oil and Gas Journal (8) 7741
Oliveira, A. I. de (9) 7755
Ott, H. (3) 7690

Parr, J. O. (10) 7774
Peacock, H. B. (1, 3) 7655
Petroleo Interamericano (8) 7742
Petty, O. S. (10) 7772, 7775
Pluvinage, Philippe (4) 7709
Pontecorvo, Bruno (10) 7783
Popov, V. V. (3) 7691

Ritzmann, O. F. (8) 7743
Roberts, John (3) 7692
Rooney, W. J. (2) 7668
Rose, N. A. (4) 7710

Sawdon, W. A. (5) 7719
------- (8) 7744
Scheffer, V. (1) 7656
Scherbatskoy, S. A. (10) 7778
Schlumberger, Marcel (10) 7757, 7758, 7762, 7763, 7764
Scholte, J. G. (3) 7693
Shepherd, G. F. (5) 7720
Shnirman, G. L. (3) 7694
Short, E. H., Jr. (4) 7711
Simpson, J. A. Jr. (5) 7721
Sloat, John (3) 7695
Smith, G. A. (10) 7784
Solaini, Luigi (1) 7646

Generated on 2024-09-19 14:42 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
THE OHIO STATE UNIVERSITY

Sterrett, Elton (5) 7722
Strona, A. A. (2) 7669
Swan, B. G. (3) 7696
Swift, Gilbert (10) 7778

Taggart, M. S. Jr. (10) 7781
Terrestrial Magnetism and Atmospheric Electricity (2) 7670
-------- (8) 7745
Thyssen, S. von (1) 7657
Ting, S. L. (2) 7671
Tovchigrechko, S. S. (1) 7648
Trappe, F. (3) 7697
Tripp, R. M. (7) 7726

Vallely, J. L. (1) 7653
Van Tuyl, F. M. (8) 7746
Vening-Meinesz, F. A. (1) 7658
Vogt, K. (4) 7704

Wark, F. J. (5) 7716
Warner, L. A. (2) 7672
Weller, J. M. (8) 7747
West, T. S. (4) 7712
White, W. N. (4) 7710
Willis, Bailey (3) 7698
Wilson, J. T. (4) 7706
Wyckoff, R. D. (10) 7766

Zanon, F. S. (3) 7699
Zobell, C. E. (7) 7727

Generated on 2024-09-19 14:39 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
THE OHIO STATE UNIVERSITY

INDEX TO GEOPHYSICAL ABSTRACTS 116 - 119
January - December 1944

	Abs.	Class	N
A			
Ackers, A. L. Apparatus for well logging, U. S. Patent 2,342,827	118	(10)	762
Adams, J. E. Paleogeography and petroleum exploration..	119	(8)	772
Adler, J. L. Geophysical exploration for stratigraphic oil traps	117	(8)	741
Agapeyeff, A. de. Maps	119	(9)	774
Agocs, W. B. A method of determining the time break on deep-sea records from the water sound arrivals	118	(3)	75?
Albertson, M. M. Radiological method of surveying wells, U. S. Patent 2,339,129	117	(10)	749
Alcock, E. D. The correlation refraction method of seismic surveying	117	(3)	740
Alder, R. L. Recompletions based on radioactivity logs.	116	(5)	73?
Angenheister, G. The determination of a boundary surface by means of the travel times or the angle of direction of reflected waves (in German)	119	(3)	76?
Antes, L. L. Gravity meter, U. S. Patent 2,327,692	116	(10)	73?
Archibald, R. A. Mathematical tables and aids to computation	117	(9)	74?
Arkhangelsky, A. D. Geological results of the general magnetometric and gravimetric surveys of the U.S.S.R. (in Russian)	116	(1,2)	72
Arnett, R. D. The correlation refraction method of seismic surveying	117	(3)	74
Arnold, J. C. Magnetic well logging, U. S. Patent 2,338,991	117	(10)	74
Arthur, M. A. Geochemical prospecting, U. S. Patent 2,330,021	116	(10)	73
Athy, L. F. Method of making geophysical explorations, U. S. Patent 2,336,053	117	(10)	74
Ayres, L. G. Ups and downs in seismograph field operations	116	(3)	72
B			
Baird, H. F. Magnetic declination in New Zealand for epoch 1943.5	118	(2)	7?
Ballarin, S. Tables for the calculation of the second derivatives of the potential referred to uniform cylindrical ring sectors (in Italian)	118	(1)	7?
Barcklow, J. C. Adaptability of radioactivity logs to limestone zones in old and new wells	117	(5)	74

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Barnes, K. B. Core analysis: Methods and applications.	119	(8)	7729
Barnes, V. E. Correlation of gravity observations with the geology of the Smoothingiron granite mass, Llano County, Tex.	118	(1)	7515
Barsch, O. Geophysical exploration for oil in the European part of the Soviet Union (in German)	118	(8)	7584
----- Note on the report of Seismos Co. about gravimetric studies in the region of Varna, Bulgaria (in German)	119	(1)	7644
Bartels, Julius. Statistics in geophysics (in German)	119	(8)	7730
Barth, Gustav. Means for measuring magnetic fields, U. S. Application A.P.C. 402,530	119	(10)	7761
Barton, P. D. Method of detecting petroleum deposits, U. S. Patent 2,346,735	118	(10)	7641
Bauernschmidt, A. I., Jr. West Ranch oil field, Jackson County, Tex.	118	(4)	7559
Bazzoni, C. B. A synopsis of three lectures on modern applied geophysics	118	(8)	7585
Beacham, C. C. Precise measurement of deep electrical anomalies	119	(4)	7712
Beckman, A. O. Method of soil analysis for location of oil deposits, U. S. Patent 2,348,103	119	(10)	7771
Beers, R. F. The radioactivity and organic content of some Paleozoic shales	117	(5)	7427
----- Distribution of radioactivity in ancient sediments	119	(5)	7713
Bellamy, E. F. The International Seismological Summary: July - September, October - December, 1934, and Index 1934	116	(9)	7337
Belluigi, Arnaldo. The determination of the stratum thickness and depth of geologic accumulations of methane by means of gasometric measurements (in Italian)	119	(5,7)	7714
Belousov, V. V. Migration of radioelements and the development of the structure of the earth (in Russian)	117	(5)	7428
Berger, W. R. Geologic significance of oil-field waters and their relationship to structure and production.	117	(7)	7441
Bernstein, Arthur. A survey of methods of constructing magnetic charts	119	(2)	7659
Berson, I. S. Hodographs of repeatedly reflected waves, reflected-refracted waves, and refracted-reflected waves (in Russian)	117	(3)	7405
Biot, M. A. Analystical and experimental methods in engineering seismology	119	(3)	7674
Bishopp, D. W. A short review of Irish mineral resources	119	(9)	7749
Bitter, Francis. The scientific significance of ferromagnetism	118	(2)	7520

Generated on 2024-09-19 14:49 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Blake, Archie. The noninvariantive character of the iso-p surface as an iso-P surface in the statistical interpretation of geophysical data	116	(3)	727
Blasier, Herbert. Method of measuring earth potentials, U. S. Patent 2,344,672	118	(10)	762
Blau, L. W. Progress recorded in gravitational, seismic, and geochemical methods, and in well logging..	116	(8)	732
----- Geochemical prospecting, U. S. Patent 2,330,026..	116	(10)	736
----- Well logging, U. S. Patent 2,337,442	117	(10)	749
----- Process for locating valuable subterranean deposits, U. S. Patent 2,337,443	117	(10)	749
Bliss, A. D. Radioactive substances. III. The analysis and age of a North Carolina monazite	118	(5)	759
Bock, R. The practice of magnetic measurements (in German)	118	(9)	760
Bodle, R. R. Additional evidence for high-speed surface waves over Atlantic paths	116	(3)	727
----- United States earthquakes, 1942	119	(3)	767
Boletin de informaciones petroleras (Y.P.F.) The geological map of Argentina (in Spanish)	117	(9)	746
Boots, P. H. A geophysical survey of Kuwait, Persian Gulf	117	(8)	744
Borisov, A. A. The findings of the West Siberian expedition of the State Siberian Geological Trust (in Russian)	119	(8)	773
Born, W. T. Seismic surveying, U. S. Patent 2,324,816..	116	(10)	734
Boucher, F. G. Gravity meter, U. S. Patent 2,327,697 ..	116	(10)	735
Bowie, William. Surfaces of the earth	119	(8)	773
Brant, A. A. Geophysical methods have role in prospecting	117	(8)	744
Bravinder, K. M. Los Angeles Basin earthquake of October 21, 1941, and its effects on certain producing wells in Dominquez field, Los Angeles County, Calif.	116	(3)	72
Brewster, E. G. Geochemical prospecting, U. S. Patent 2,339,651	117	(10)	74
Bronstein, K. G. Some ideas on the relationship between geomagnetic and geological data	116	(2)	72
----- The Kursk magnetic anomalies (in Russian)	117	(2)	73
Broughton, W. A. The Buckhorn iron deposits of Okanogan County, Wash.; results of a magnetic survey	118	(2)	75
Brown, Andrew. Use of the gravity meter in establishment of gravity bench marks	116	(1)	72
Bruckshaw, J. M. Some factors limiting geophysical prospecting	116	(8)	73
Bruhns, K. C. A new manuel of logarithms to seven places of decimals	117	(9)	74
Bucher, W. H. The stereographic projection, a handy tool for the practical geologist	119	(8)	77

Generated on 2024-09-19 14:40 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Bagbee, J. M. Reservoir analysis and geologic structure	116	(8)	7322
Balashevich, Iu. P. Concerning the question of studying electrical anomalies on models (in Russian)	119	(4)	7700
Ballard, E. C. The earth's gravitational field	119	(1)	7645
Bullen, K. E. The ellipticities of surfaces of equal density in the earth's interior	116	(3)	7281
----- Seismological tables	119	(3)	7685
Bureau of Mines, U. S. A. Federal Explosives Act, 1944.	119	(3)	7676
Byerly, Perry. Love waves and the nature of the motion at the origin of the Chilean earthquake of November 11, 1922	118	(3)	7537
Bynum, P. T. Fluid well perforator, U. S. Patent 2,328,782	116	(10)	7360

C

Calfas, P. Electrical prospecting of the subsoil. The search and study of petroliferous fields and oil deposits (in French)	119	(4)	7701
California Institute of Technology. Cooperative researches at the Seismological Laboratory (1941-42).	116	(3)	7282
Campbell, J. G. Method of determining suitable areas for oil exploration, U. S. Patent 2,329,824	116	(10)	7364
Campbell, J. L. P. Checking your cement jobs with radioactivity logging	117	(5)	7429
----- Gamma-ray logging in east Texas	118	(5)	7568
Cappelletti, M. S. The Argentine seismograph constructed in the mechanical-precision shops of the Department of Meteorology, Geophysics, and Hydrology (in Spanish)	116	(3)	7283
Carnegie Institution, Washington, D. C. Year Book No. 40, July 1, 1940 - June 30, 1941	116	(9)	7333
----- Year Book No. 41, July 1, 1941 - June 30, 1942	117	(9)	7465
----- Year Book No. 42, July 1, 1942 - June 30, 1943	118	(9)	7605
Chella, Morio. Apparatus for the photographic registration of pendulum measurements of gravity (in Italian)	119	(1)	7646
Chapgar, S. K. The age of the Rajmahal traps and some neighboring dike rocks by the "lead ratio" method.	118	(5)	7571
Chin, Y. H. On the possible oil fields in Szechuan as indicated by isocarb lines	118	(7)	7581
Chireix, Henry. Apparatus for detecting underground lying metallic objects, U. S. Application A.P.C. 419,945	119	(10)	7765
Chiriboga G., Alfonso. Extensive exploration under way in Ecuador	117	(8)	7449
Christie, N. J. Geophysical exploration system, U. S. Patent 2,329,721	116	(10)	7363

Generated on 2024-09-19 14:48 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Church, W. L. Wall scraper and well logging tool, U. S. Patent 2,344,598	118	(10)	76
Clark, S. K. Classification of faults	116	(1)	72
Claudet, Aimé. Method and apparatus for investigating earth formations traversed by boreholes, U. S. Patent 2,334,475	117	(10)	74
Clewell, D. H. Gravity meter, U. S. Patent 2,325,005	116	(10)	73
----- Gravity meter, U. S. Patent 2,337,152	117	(10)	74
Closs, H. Examples of curves of gravity gradient in the light of the character of flanking in selected types of North German salt domes (in German)	118	(1)	75
Coast and Geodetic Survey, U. S. A. Progress report on strong-motion earthquake work, October - December 1943	116	(9)	73
----- Uses of magnetic stations	117	(2)	73
----- Progress report on strong-motion earthquake work, January - March 1944	118	(9)	76
Cohee, G. V. Use of electrical logs in subsurface studies in Indiana	116	(4)	73
Colbert, L. O. Geophysical measurements in the American republics	118	(8)	75
Combrie, L. J. Barlow's tables, 1941 ed.	117	(9)	74
Congrès mondial du petrole, 2-ème, Paris, 1937. Nomenclature of technical terms of the petroleum industry (German-English-French)	117	(9)	74
Conklin, G. M. Gamma-ray well logging in Trinidad	117	(5)	73
Cotton, L. A. The constitution of the earth's interior	118	(8)	75
Couch, L. E. Perforating gun for oil-well casings, U. S. Patent 2,327,340	116	(10)	7
Coulomb, Jean. On magnetic disturbances recorded in the form of loops (in French)	119	(2)	7
Coulson, C. A. Waves, a mathematical account of the common types of wave motion	118	(9)	7
Curtis, L. F. A counting method for the determination of small amounts of radium and of radon	118	(5)	7

D

Dake, H. C. The core of the earth	116	(3)	7
Daly, J. W. How to make velocity corrections	119	(3)	7
Daly, R. A. The floor of the ocean, 1942 ed.	119	(8)	7
Davidson, Stanley. Modernized exploration technique in eastern Canadian mining fields	118	(8)	7
Davis, F. J. A counting method for the determination of small amounts of radium and of radon	118	(5)	
Davis, R. F. Apparatus for determining the dip in the earth's substrata, U. S. Patent 2,326,640	116	(10)	
Dickey, P. A. Natural potentials in sedimentary rocks.	116	(4)	
Dillon, Lyle. Determination of magnetic and electrical anisotropy of formation core samples, U. S. Patent 2,334,393	117	(10)	

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Dillon, Vincent. The deep-focus earthquake of May 19, 1940, in the Sea of Okhotsk	116	(3)	7294
Dean, R. L. Gas detection, U. S. Patent 2,349,250	119	(10)	7779
Dobrin, M. B. Description of ESMWT course in petroleum geophysics conducted in Washington, D. C.	119	(8)	7734
Dobrotin, N. A. Radiation receiver with reduced sensitivity to the position of the source	116	(5)	7310
Doetsch, Gustav. Theory and application of the Laplace transformation (in German)	118	(9)	7608
Doll, H. G. Well-surveying instrument, U. S. Patent 2,338,028	117	(10)	7494
----- Well-surveying apparatus, U. S. Patent 2,338,029	117	(10)	7495
Dougherty, P. F. Method of detecting petroleum deposits, U. S. Patent 2,346,735	118	(10)	7641
Dryden, H. L. Absolute gravity determinations	116	(1)	7255
----- A reexamination of the Potsdam absolute determination of gravity	117	(1)	7380
Dubief, J. Results of magnetic measurements in Sahara (in French)	117	(2)	7392
Duerksen, J. A. Gravity anomalies and meridian deflections in Hawaii	117	(1)	7381

E

Easton, W. H. Subsurface structure and oil possibilities of parts of Edwards, Richland, and Wabash counties, Illinois	117	(4)	7420
Ebbley, Norman, Jr. Oil seepages on the Alaskan arktic slope	118	(8)	7589
Ebert, A. Foundations of the evaluation of geoelectrical measurements in depth (in German)	119	(4)	7702
Ecle, Louis. Different kinds of magnetic disturbance (in French)	118	(2)	7522
Eby, J. B. Geophysical history of the Iowa field, Calcasieu and Jefferson Davis Parishes, La.	116	(1)	7256
Eckhardt, E. A. Average number of geophysical parties shows increase despite draft	117	(8)	7450
Ehrenhaft, Felix. Magnetolysis and the electric field around the magnetic current	118	(2)	7523
----- New experiments about the magnetic current	119	(2)	7661
Eisler, J. D. Seismic surveying, U. S. Patent 2,346,369	118	(10)	7638
Elkins, T. A. Association of magnetic and density contrasts with igneous rocks classifications	116	(1)	7265
Emde, Fritz. Table of functions with formulae and curves	117	(9)	7468
Evans, R. D. Alpha-helium method for determining geological ages	117	(5)	7431

Generated on 2024-09-19 15:21 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
----- Determination of the helium content of terrestrial materials	119	(5)	771
Evjen, H. M. Apparatus for making geophysical explorations, U. S. Patent 2,342,626	118	(10)	762
----- Apparatus for making geophysical explorations, U. S. Patent 2,342,627	118	(10)	762
----- Apparatus for making geophysical explorations, U. S. Patent 2,343,140	118	(10)	762
----- Coupling circuit, U. S. Patent 2,342,628	119	(10)	776
----- Coupling circuit, U. S. Patent 2,342,629	119	(10)	776
Evjen, K. H. Geological exploration apparatus, Canadian Patent 415,208	117	(10)	750
----- Apparatus for making geophysical explorations, U. S. Patent 2,342,627	118	(10)	762

F

Farnham, F. C. Seismic surveying, U. S. Patent 2,340,314	118	(10)	761
Fearon, R. E. Well-logging instrument, U. S. Patent 2,349,225	119	(10)	777
----- Well-logging method and device, U. S. Patent 2,349,712	119	(10)	778
Fedukovich, V. S. Physical methods of geophysical prospecting (in Ukranian)	119	(9)	775
Finch, R. H. The seismic prelude to the 1942 eruption of Mauna Loa	116	(3)	725
----- Harmonic tremor	118	(3)	753
Fisher, G. H. Coring apparatus, U. S. Patent 2,345,739	118	(10)	763
Fisher, N. H. The Gazelle Peninsula, New Britain, earthquake of January 14, 1941	119	(3)	761
Fitzgerald, P. E. Selectrive acidizing and permeability determination by an electrical method	116	(4)	736
----- Some recent advances in well-treating methods and equipment	119	(4)	771
Fleming, J. A. Researches in terrestrial magnetism and electricity at Department of Terrestrial Magnetism, Carnegie Institution of Washington, for the year April 1942 to March 1943	116	(2)	72
----- Geomagnetism in Latin America	117	(2)	73
----- The sun and the earth's magnetic field	117	(2)	73
----- List of geomagnetic observatories and thesaurus of values, III	117	(2)	73
----- Summary of the year's work, to June 30, 1943, Department of Terrestrial Magnetism, Carnegie Institution of Washington	117	(8)	74
----- List of geomagnetic observatories and thesaurus of values, IV-V	118	(2)	73
Flugge-De Smith. Mining ventilation	117	(6)	74
Forejt, H. Exploration of steeply inclined surfaces of electrical discontinuity underground by radio prospecting (in German)	117	(5)	7

Generated on 2024-09-19 14:48 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Frank, I. M. Radiation receiver with reduced sensitivity to the position of the source	116	(5)	7310
Fritsch, Volker. Exploration of steeply inclined surfaces of electrical discontinuity underground by radio prospecting (in German)	117	(5)	7432

G

Gaby, P. P. A new type of seismic cross section wherein accuracy of representation is rendered insensitive to velocity error	117	(3)	7406
Gallie, J. F. History of the Society of Exploration Geophysicists	118	(8)	7590
Galmarini, A. G. Recent geomagnetic work and plans of the Dirección de Meteorologia, Geofisica, e Hidrologia, Republica Argentina	119	(2)	7662
Garburtsev, G. A. Instruments for seismic prospecting and ways of their improvement	116	(3)	7286
Gardner, A. M. Electrode design solves problem of electrical logging in oil base drilling fluids	117	(4)	7421
Gardner, D. H. Geophysics - scientific exploration for oil	117	(8)	7452
Garner, C. L. Scientific and economic value of basic gravity data	116	(1)	7257
Garrison, A. D. Determination of underground strata, U. S. Patent 2,346,481	118	(10)	7639
Gebhardt, R. E. The seismological installation at the Sitka Magnetic Observatory	117	(3)	7407
Gerling, E. K. Age determination of rocks and minerals by the helium method	117	(5)	7433
Germain-Jones, D. T. Seismic refraction technique	116	(3)	7287
Gershanik, Simon. Results of seismic measurements in 1935 (in Spanish)	119	(3)	7679
Gillin, J. A. The correlation refraction method of seismic surveying	117	(3)	7408
Glangeau, Louis. The gravimetry, fine tectonics, and deep structure of the boundary of the Jura Mountains (in French)	118	(1)	7507
Goodman, Clark. Alpha-helium method for determining geological ages	117	(5)	7431
----- Distribution of radioactivity in ancient sediments	119	(5)	7713
----- Determination of the helium content of terrestrial materials	119	(5)	7715
Gorshkov, P. M. Gravity knowledge of the eastern part of the U.S.S.R.	116	(1)	7258
Goudey, Raoul. Measurements of the intensity of gravity in southwest France during 1941, carried out in March-August 1941 (in French)	119	(1)	7647

Generated on 2024-09-19 14:47 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Govorova, L. A. An experiment in rapid determination of gravity (in Russian)	119	(1)	764
Graf, Anton. Gravity meter, U. S. Application A.P.C. 377,395	119	(10)	776
Grosskopf, J. Measurements of propagation over an inhomogeneous ground (in German)	119	(4)	770
Gunn, Ross. A quantitative study of the lithosphere and gravity anomalies along the Atlantic coast	116	(1)	723
Gustafsson, G. V. A. Geophysical instrument, U. S. Patent 2,331,904	116	(10)	737
Guttenberg, Beno. Seismological evidence for roots of mountains	116	(3)	728
----- Variations in physical properties within the earth's crustal layers	117	(3)	744
----- Apparent origin time of S.	118	(3)	75
----- Travel times of principal P and S phases over small distances in southern California	119	(3)	76
----- Energy ratio of reflected and refracted seismic waves	119	(3)	76
Guyod, Hubert. Electrical well logging:			
Part 1. Review of well-logging methods	118	(4)	75
Part 2. Three-dimentional flow of electricity	118	(4)	75
Part 3. The single-point resistance method	118	(4)	75
Part 4 - 15.	119	(4)	77
H			
Haalck, H. The local distribution of the first three vertical differential quotients W_z, W_{zz}, and W_{zzz} of the gravity potential in the Heide survey district, Holstein (in German)	119	(1)	7
Hadfield, E. C. R. Maps	119	(9)	7
Hagan, W. W. Electrical earth-resistivity surveys	116	(4)	7
Hallimond, A. F. Magnetic exploration by Geological Survey	116	(2)	7
----- Laboratory experiments on the magnetization of rocks	117	(2)	7
Hammer, Sigmund. Estimating ore masses in gravity prospecting	117	(1)	7
Hare, D. G. C. Subsurface prospecting, U. S. Patent 2,334,262	117	(10)	7
----- Subsurface prospecting, U. S. Patent 2,345,119	118	(10)	7
Harrison, E. P. Magnetic surveying apparatus, U. S. Patent 2,335,117	117	(10)	7
Hart, C. A. Air photography applied to surveying	118	(9)	7
Hassler, G. L. Method and apparatus for permeability measurements, U. S. Patent 2,345,935	119	(10)	7
Hawley, P. F. Fault location by electrical prospecting - an example	116	(4)	7

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Hayes, R. C. Earthquakes in New Zealand in the year 1941	117	(3)	7410
----- On earthquake distribution in New Zealand	118	(3)	7540
----- Earthquakes in New Zealand in the year 1942	119	(3)	7682
Healy, J. Boron in hot springs at Tokaanu, Lake Taupo	117	(2)	7396
Heck, N. H. The role of the Western Hemisphere in seismology under present-day conditions	116	(3)	7289
----- Advances in engineering seismology	117	(3)	7411
Hefley, D. G. Selective acidizing and permeability determination by an electrical method	116	(4)	7305
Heigl, J. J. Well logging, U. S. Patent 2,337,465	117	(10)	7493
Heiland, C. A. Annual review: Geophysics (1943)	116	(8)	7323
----- Geophysical activities and developments in wartime	117	(8)	7453
Henderson, J. T. Earthquake risk in New Zealand	119	(3)	7683
Hercules Powder Co. Seismograph dynamite	116	(3)	7290
Heroy, W. B. All methods of discovery are needed to reverse trend of petroleum reserves	117	(8)	7454
Herroun, E. F. Laboratory experiments on the magnetization of rocks	117	(2)	7397
----- A comparison of the magnetic properties of solid and powdered magnetites, with observations on coercive force	118	(2)	7525
Hersey, J. B. Gravity investigation of central-eastern Pennsylvania	119	(1)	7650
Hess, H. H. Peridotite intrusions, gravity anomalies, and island arcs: A contribution to the ophiolite problem	116	(1)	7260
Hodgson, E. A. Bibliography of seismology	119	(3)	7684
Holmes, W. O. Preventing power-line mishaps in seismographic shooting	117	(3)	7412
Hoover, Herbert, Jr. Means for obtaining soil samples, U. S. Patent 2,325,057	116	(10)	7343
----- Well-logging method, U. S. Patent 2,328,555	116	(10)	7359
----- Geophysical-exploration system, U. S. Patent 2,329,721	116	(10)	7363
----- Apparatus for seismic prospecting, U. S. Patent 2,330,216	116	(10)	7367
Horner, W. L. Method and apparatus for measuring porosity of solids, U. S. Patent 2,327,642	116	(10)	7353
Horton, C. W. A note on the reading of seismograms	118	(3)	7541
----- Gravity anomalies due to extensive sedimentary beds	119	(1)	7651
Horvitz, Leo. Geochemical prospecting, U. S. Patent 2,330,716	116	(10)	7368
----- Geochemical prospecting, U. S. Patent 2,330,717	116	(10)	7369
----- Geochemical prospecting, U. S. Patent 2,336,176	117	(10)	7484
----- Geochemical prospecting, U. S. Patent 2,336,612	117	(10)	7487

Generated on 2024-09-19 14:49 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
----- Geochemical well-logging, U. S. Patent 2,336,613.	117	(10)	748
----- Chemical prospecting, U. S. Patent 2,338,643	117	(10)	749
----- Geochemical prospecting, U. S. Patent 2,343,772..	118	(10)	76
Howard, W. V. Outline of oil possibilities of shield area of South America	117	(8)	74
----- Prospecting for stratigraphic traps	118	(8)	75
Howe, H. H. On spontaneous increase of magnetic moments	116	(2)	72
----- Magnetic observatory results at Honolulu, Hawaii, for 1931-34	116	(2)	72
----- Magnetic observatory results at San Juan, Puerto Rico, for 1926-28	117	(2)	73
----- Magnetic observatory results at Tucson, Ariz., 1933-34; Cheltenham, Md., 1933-34; Sitka, Alaska, 1935-36; and Honolulu, Hawaii, 1935-36	118	(2)	75
Howe, H. V. Use of paleontology by the oil industry ...	118	(8)	75
Howell, L. G. Gamma-ray measurements in oil wells	118	(5)	75
Howland, A. L. Geologic principles in the search for chromite ore	117	(1,2)	73
Hubbert, M. K. An exploratory study of faults in the Cave in Rock and Rosiclare districts by the earth-resistivity method	118	(4)	75
Hughes, J. D. Radioactivity logging provides valuable data for Gulf coast operations	116	(5)	73
Hughes, J. S. The International Seismological Summary: July-September, October-December, 1934, and Index 1934	116	(9)	73
Hurd, C. O. Topography's effect in the equipotential line method	117	(4)	74
Hurwitz, Louis. Magnetic observatory results at San Juan, Puerto Rico for 1926-28	117	(2)	73

I

Ide, J. McD. Gravity meter, U. S. Patent 2,341,323	118	(10)	7
Illing, V. C. Education and the petroleum industry	118	(8)	7
Isham, C. A. The role of the geophysical engineer	118	(8)	7

J

Jahnke, E. Tables of functions with formulae and curves	117	(9)	7
Jakosky, J. J. Method and apparatus for determining the electrical characteristics of geological formations traversed by drill holes, U. S. Patent 2,334,491 ..	117	(10)	7
Jarvis, W. L. Standardization of electrical log headings	116	(4)	7
Jeffreys, H. H. The stress differences in the earth's shell	117	(1)	7
----- Seismological tables	119	(3)	7
Jenkins, O. P. Geologic formations and economic development of the oil and gas fields of California	117	(9)	7

Generated on 2024-09-19 14:48 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Jeppe, C. W. B. Rock-pressure problem	117	(8)	7446
Johnson, J. H. Paleontology, petroleum, and the search for oil	119	(8)	7735
Johnston, H. F. American magnetic character figure, C_A, 3-hour-range indices, K, and mean K-indices, K_A, for July to September 1943	117	(2)	7399
----- Mean K-indices from 21 magnetic observatories and 5 quiet and 5 disturbed days for 1942	117	(2)	7400
----- American magnetic character figure, C_A, 3-hour-range indices, K, and mean K-indices, K_A, for October to December 1943, and summary for year 1943	118	(2)	7526
----- American magnetic character figure, C_A, 3-hour-range indices, K, and mean K-indices, K_A, for January to June 1944	119	(2)	7663
Jones, O. T. The relation of geophysics to geology	116	(8)	7324
Jones, W. M. Magnetic disturbances on the Canterbury plains	116	(2)	7271
Juan, V. C. On the possible oil fields in Szechuan as indicated by isocarb lines	118	(7)	7581
Jung, Heinrich. Examples for the application of anagliphic space representations in geophysics (in German)	119	(8)	7736
Jung, Karl. The gravity effect of disturbing masses and its demonstration on a unit sphere (in German)	119	(1)	7652

K

Kalapesi, A. S. The age of the Rajmahal traps and some neighboring dyke rocks by the "lead-ratio" method	118	(5)	7571
Kats, A. Z. Ground vibrations produced by impact disturbances (in Russian)	118	(3)	7542
Keevil, N. B. Radiogenic heat in rocks	116	(5)	7312
----- Method of geophysical exploration, U. S. Patent 2,330,829	116	(10)	7371
----- Thorium-uranium ratios in rocks and minerals	118	(5)	7572
----- The distribution of helium and radioactivity in rocks: VI. The Ayer granite-migmatite at Chelmsford, Mass.	119	(5)	7716
Kellum, L. B. Geologic history of northern Mexico and its bearing on petroleum exploration	119	(8)	7737
Kelly, S. F. Geophysicists, as usual, find material for discussion	117	(8)	7456
Kendall, J. T. "Magnetic" current	119	(2)	7664
Keplinger, C. H. Gun-perforator device, U. S. Patent 2,344,778	118	(10)	7630
Keston, A. S. Stable self-quenching Geiger-Muller counters containing organo-metallic compounds	116	(5)	7313

Generated on 2024-09-19 14:44 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Khlopin, V. G. Oxygen method for geological age determination by professor Lane	117	(5)	743
----- Radioactive methods for determining the geological age of some geological formations in the U.S.S.R. (in Russian)	119	(5)	771
Kimio, Uemura. Contribution to the geophysical prospecting recently employed in Japan	116	(8)	73
Kiss, S. A. Geochemical prospecting method, U. S. Patent 2,334,269	117	(10)	74
Kitsman, W. L. Perforating method and apparatus, U. S. Patent 2,340,966	118	(10)	76
Klaus, H. Faulting in the Billings oil field, Oklahoma, as interpreted from torsion-balance data and from subsequent drilling	116	(1)	72
Klotz, R. L. Seismic surveying, U. S. Patent 2,334,414.	117	(10)	74
Knapp, D. G. Magnetic observatory results at Honolulu, Hawaii, for 1931-34	116	(2)	72
----- Magnetic observatory results at Tucson, Ariz., 1933-34; Cheltenham, Md., 1933-34; Sitka, Alaska, 1935-36; and Honolulu, Hawaii, 1935-36	118	(2)	75
Koenigsberger, J. G. Surface geology and determination of the center and surface depth of a disturbing body, or plane, by geophysical methods following the potential theory (in Russian)	116	(4)	7
Komlev, L. V. The age of the pegmatite dikes of North Karelia	118	(5)	7
Kóridalin, E. A. A test of deep seismic surveying (in Russian)	119	(3)	7
Kornfeld, J. A. Peace Creek field - a stratigraphic trap	116	(3)	7
----- Oil search in the eastern Gulf region	119	(8)	7
Kornfeld, M. M. Subsurface correlation by detailed electrolog tabulation	117	(4)	7
Kovner, S. S. Progress of Soviet geophysics during 25 years	116	(8)	7
Kraskovsky, S. A. Geothermal measurements in oil and salt fields (in Russian)	118	(6)	7
----- Geothermal measurements in ore deposits (in Russian)	119	(6)	7
Krasnow, Shelley. Magnetic direction indicating instrument, U. S. Patent 2,350,402	119	(10)	7
Krynine, P. D. Sediments and the search for oil	117	(8)	
Kurbatov, L. M. The radioactivity of ferromanganese beds and the determination of the rate of their formation by the radioactive method (in Russian)	116	(5)	

Generated on 2024-09-19 14:47 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.

L

Lagerquist, P. A. Increased-sensitivity astatic pendulum gravimeter for observing variations of gravity with time	118	(1)	7508
Lagrula, J. L. The use of gravimetric method in the study of the geological structure of Algeria	116	(1)	7262
Lambert, W. D. The distance between two widely separated points on the surface of the earth	116	(8)	7327
Landes, K. K. Ground-water exploration by earth-resistivity methods	119	(4)	7706
Landowners Royalties Co., Montana. Does the seismograph work?	116	(3)	7292
Lane-Wells Co., Los Angeles. Lane-Wells radioactivity well logging	118	(5)	7574
Larsen, E. S. The distribution of helium and radioactivity in rocks: VI. The Ayer granite-migmatite at Chelmsford, Mass.	119	(5)	7716
Lasareff, P. P. Contemporary problems of the earth's magnetism (in Russian)	118	(2)	7528
Lauterbach, Robert. Geophysical surveys of hematite occurrence in the Lahn district (in German)	119	(2)	7665
Lawrence, R. W. Mechanism of detonation of explosives.	118	(3)	7543
Lee, F. W. Geophysical prospecting, U. S. Patent 2,345,608	118	(10)	7634
Lect, L. D. Vibrations from blasting	118	(3)	7544
Legge, J. A. Least-squares determination of the velocity function $V = V_o + kz$ for any set of time-depth data	116	(3)	7293
----- A proposed least-square method for the determination of the elevation factor	118	(1)	7509
Leibenson, L. S. Application of variation equation of elasticity to the solution of a geomechanical problem of the earth's deformation and vibration (in Russian)	119	(8)	7739
Lejay, Pierre. New determinations of gravity in the southeast of France (in French)	118	(1)	7510
Leonardos, O. H. Geology of Brazil (in Spanish)	119	(9)	7755
Lerici, C. M. Some considerations about the future of prospecting for minerals in the earth (in Italian)	118	(8)	7595
Lewis, J. A. Method for determining permeability, U. S. Patent 2,348,985	119	(10)	7776
Lewis, W. B. Frequency converter system for geophysical prospecting, U. S. Patent 2,342,676	118	(10)	7624
----- Coupling circuit, U. S. Patent 2,342,628	119	(10)	7767
----- Coupling circuit, U. S. Patent 2,342,629	119	(10)	7768
Lin, S. T. A magnetometer for the determination of the vertical component of the earth's magnetic field..	119	(2)	7671

Generated on 2024-09-19 15:36 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Linblad, A. R. Damping device in gravimeters, U. S. Patent 2,346,593	118	(10)	76
Linden, N. A. Seismic activity in 1939, according to the observations of teleseismic stations of the Seismological Institute of the Academy of Sciences of the U.S.S.R. (in Russian)	118	(3)	75
Livingston, Penn. Exploratory water-well drilling in the Houston district, Texas	119	(4)	77
Lockenvitz, A. E. The periodic variations of the gravitational force	116	(1)	72
----- The periodic variations of the gravitational force. I.	117	(1)	73
Lundberg, H. T. F. A plea for lowering the brows of the geophysicists	116	(8)	73
----- Method of geophysical exploration, U. S. Patent 2,330,829	116	(10)	73
Lynch, W. A. The deep-focus earthquake of May 19, 1940, in the sea of Okhotsk	116	(3)	72

M

Maillet, Raymond. Method and apparatus for seismic underground prospecting, U. S. Application A.P.C. 254,743	119	(10)	77
Malamphy, M. C. Geophysical survey of the Arkansas bauxite region	119	(1,2)	76
Malmqvist, J. D. Geophysical instrument, U. S. Patent 2,331,904	116	(10)	73
----- Damping device in gravimeters, U. S. Patent 2,346,593	118	(10)	76
Manzanera, Lorenzo. Apparatus for recording wave-form signals, U. S. Patent 2,348,401	119	(10)	77
Marble, J. P. Allanite (Orthite) as an index of geological age	117	(5)	74
Maris, H. B. Device for measuring extremely small angles, U. S. Patent 2,347,702	119	(10)	77
Martienssen, Oscar. Thermometer for deep well measurements, U. S. Application A.P.C. 342,488	119	(10)	77
Martin, H. Initial oscillation and the recording of impact (in German)	119	(3)	75
Masarsky, S. I. The derivation of equations for hodographs of waves refracted and reflected from the surfaces of "n" flat, inclines boundaries (in Russian)	118	(3)	7
----- A test of deep seismic surveying (in Russian)	119	(3)	7
----- Some possible conflicts in the interpretation of hodographs of waves refracted from a three-layered structure (in Russian)	119	(3)	7

Generated on 2024-09-19 14:45 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Mathematical Tables Project, W.P.A., U. S. A. Table of reciprocals of the integers from 100,000 through 200,009	118	(9)	7610
----- Tables of circular and hyperbolic tangents and cotangents for radian arguments	118	(9)	7611
----- Tables of the Bessel functions $J_0(z)$ and $J_1(z)$ for complex arguments	119	(9)	7753
Maurain, C. Concerning magnetic disturbances with sudden onsets observed in the region of Paris. Annual and daily distributions of sudden onsets (in French)	118	(2)	7529
----- Concerning magnetic disturbances with sudden onsets. The direction of sudden onsets (in French).	119	(2)	7666
Maxwell, C. T. Radioactivity logs prove advantageous in oil-base mud	119	(5)	7718
Mayer, A. W. Chemical-technical dictionary (German-English-French-Russian), 1942	116	(9)	7335
Mayne, W. H. Seismic circuit, U. S. Patent 2,326,153..	116	(10)	7347
McAlister, E. D. Apparatus for gas analysis, U. S. Patent 2,327,539	116	(10)	7352
McCann, G. D. Field disturbances produced by lightning	118	(4)	7564
McCarty, M. D. Geophone, U. S. Patent 2,328,222	116	(10)	7356
----- Apparatus for recording seismic waves, U. S. Patent 2,340,272	117	(10)	7500
McCollum, E. V. Use of the gravity meter in establishment of gravity bench marks	116	(1)	7264
----- Method of making geophysical explorations, U. S. Patent 2,336,053	117	(10)	7485
McDonald, J. S. Improvement in well tools, U. S. Patent 2,327,362	116	(10)	7351
Mei, A. I. The amplitude ratio, PP:P, as recorded by Galitzin seismographs	116	(3)	7295
Meisser, Otto. Practical geophysics for study, research, and practice (in German)	119	(9)	7754
Merritt, J. W. Geochemistry as aid to successful exploration	119	(7)	7725
Merten, Eugen. Sensitivity control for seismic recording, U. S. Patent 2,349,186	119	(10)	7777
Mikhailov, A. A. Gravity surveying in the U.S.S.R. (in Russian)	117	(1)	7385
Miller, B. L. Specific data on the so-called Reading overthrust	117	(1)	7386
Miller, J. C. P. Tables for converting rectangular to polar coordinates	117	(9)	7470
Mintrop, Ludger. On the application of the seismic method in oil exploration and its practical and scientific aspects (in German)	118	(3)	7547
Missouri Geological Survey. Gravimetric and magnetic maps of the State of Missouri	118	(1,2)	7511

Generated on 2024-09-19 14:47 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Modriniak, N. Geophysical investigation of the Puhi-puhi mercury deposit	119	(2)	76
Montana Oil Journal. Geophysics aids wildcatters	118	(8)	75
Montandon, Frederic. The seismisms of strong intensity in Switzerland	119	(3)	76
Moon, C. A. Method for geophysical prospecting, U. S. Patent 2,349,366	119	(10)	77
Moore, D. W. Magnetic field responsive device, U. S. Patent 2,331,617	118	(10)	76
Moore, R. W. An empirical method of interpretation of earth-resistivity measurements	119	(4)	77
Morgan, C. G. Geophysical exploration system, U. S. Patent 2,329,721	116	(10)	73
Morgan, D. E. Field disturbances produced by lightning.	118	(4)	75
Mounce, W. D. Natural potential in well logging	116	(5)	73
Mühlberg, Max. Temperature measurements in the borehole near Tuggen in the Linth plain, and other findings in Switzerland (in German)	119	(6)	77
Müller, Max. The decrease of the current density of an electric doublet with an increase of distance (in German)	119	(4)	77
Muzzey, D. S. Electrical exploration apparatus, Canadian Patent 418,747	117	(10)	75

N.

National Oil Scouts and Landmen's Association. Oil and gas field development in United States, Year Book 1943	117	(9)	74
National Research Council, U. S. A. Transactions of the American Geophysical Union, 1943	117	(9)	74
Nelson, J. H. The seismological installation at the Sitka magnetic observatory	117	(3)	7
Nettleton, L. L. Association of magnetic and density contrasts with igneous rock classifications	116	(1)	72
Neufeld, Jacob. Well-logging instrument, U. S. Patent 2,349,225	119	(10)	7
Neumann, Frank. Progress report on seismological activities of the United States Coast and Geodetic Survey, April 1, 1942 to March 31, 1943	116	(3)	7
----- United States earthquakes, 1941	117	(3)	7
Newhouse, W. H. Ore deposits as related to structural features	116	(9)	7
Niemczyk, Oscar. Fissures in Iceland (in German)	119	(1)	7
Nörgaard, G. A new gravimeter and measurements on the island of Bornholm (in French)	118	(1)	7
Northern Miner, Toronto. Metalore resumes drilling on magnetometer results	116	(2)	7
Noyes, Bradford. Aging thermometers	118	(6)	7

Generated on 2024-09-19 14:42 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
O			
Ogievich, I. B. The connections between several amplifiers fed from a common source (in Russian)	118	(3)	7548
Oil, New Orleans, La. Salt domes of the Gulf coast region	119	(8)	7740
Oil and Gas Journal. Oil discovery in United States stalled by its own success	119	(8)	7741
Oil News, Albuquerque, N. M. Survey parties reported thick in New Mexico	117	(8)	7458
Oks, Meyer. Coordination of geophysical methods (in Spanish)	117	(1,3)	7388
Oliveira, A. I., de. Geology of Brazil (in Spanish) ..	119	(9)	7755
Olson, R. W. Method for seismic surveying, U. S. Patent 2,340,275	117	(10)	7501
Ongley, M. Wairarapa earthquake of 24th June, 1942, together with map showing surface traces of faults recently active	117	(3)	7414
Orlov, A. Pole movement from 1891.5 to 1940.0	117	(2)	7401
Ott, H. Reflection and refraction of spherical waves; effects of second order (in German)	119	(3)	7690
Oxford University Observatory. International Seismological Summary: July-September, October-December, 1934, and Index 1934	116	(9)	7337
P			
Pariisky, N. N. Investigation of the time variations of gravity in the Caucasus	118	(1)	7513
Parr, J. O. Jr. Seismic circuit, U. S. Patent 2,331,623	116	(10)	7375
----- Method of and apparatus for seismic surveying, U. S. Patent 2,331,624	116	(10)	7376
----- Seismic surveying, U. S. Patent 2,348,409	119	(10)	7774
Pathode, H. W. Source beds of petroleum	116	(7)	7318
Peacock, H. B. The geophysical history of the Cayuga field, Anderson County, Tex.	119	(1,3)	7655
Peoples, J. W. Geologic principles in the search for chromite ore	117	(1,2)	7387
Permiakov, V. M. The determination of geological age of minerals and rocks by the lead method	117	(5)	7436
Petrascheck, W. Geochemical depth surveying; its applicability to coal (in German)	117	(7)	7442
Petroleo Interamericano. Glossary of terms more commonly used in geology and geophysics	119	(8)	7742
Petroleum, London. Education and petroleum industry ..	116	(8)	7329
Petty, O. S. Method of seismic reflection surveying, U. S. Patent 2,331,080	116	(10)	7372
----- Time-break circuit, U. S. Patent 2,331,627	118	(10)	7615

Generated on 2024-09-19 14:47 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
----- Magnetic seismometer, U. S. Patent 2,348,225	119	(10)	77
----- Method for correlating seismographic curves, U. S. Patent 2,348,411	119	(10)	77
Piety, R. G. Well-surveying device, U. S. Patent 2,333,883	117	(10)	74
----- Well-surveying device, U. S. Patent 2,347,794 ...	118	(10)	76
Pirson, S. J. Two-year summary of geodynamic prospecting results	116	(7)	73
----- Method for the geochemical prospection of hydrocarbon deposits, U. S. Patent 2,324,107	116	(10)	73
Pluvinage, Philippe. The influence of thermal convection upon the terrestrial electrical field (in French)	119	(4)	77
Pontecorvo, Bruno. Method and apparatus for geophysical exploration, U. S. Patent 2,349,753	119	(10)	77
Popov, V. V. The density of distribution of the epicenters of earthquakes on the territory of the U.S.S.R. (in Russian)	119	(3)	76
Pospelov, P. A. A combined West-Siberian geophysical expedition searches for oil (in Russian)	118	(8)	75
Puchkov, S. V. Ground vibrations produced by impact disturbances (in Russian)	118	(3)	75
Pugh, W. E. Method of seismic prospecting, U. S. Patent 2,345,288	118	(10)	76

R

Ramirez, J. E. Geophysical Institute of the Columbian Andes (in Spanish)	118	(8)	75
Raymond, E. F. Gun perforation in wells, U. S. Patent 2,346,233	118	(10)	76
Razdymakha, G. S. Centrifugal gravimeter (in Russian)..	118	(1)	75
Rearden, D. S. Geochemical prospecting, U. S. Patent 2,339,651	117	(10)	7
Reich, H. The findings of seismic refraction surveys in the Alpine foreland between Inn and Melk (in German)	118	(3)	7
Reichert, Conrad. Seismic recording system, U. S. Patent 2,340,770	118	(10)	7
Rey, P. Coordination of geophysical methods (in Spanish)	117	(1,3)	7
Richter, C. F. Calculation of small distances	117	(3)	7
----- Apparent origin time of $\overline{S}$	118	(3)	7
----- Mathematical questions in seismology	118	(3)	7
Ricker, N. H. Further developments in the wavelet theory of seismogram structure	116	(3)	7
Rieseberg, H. E. A new gold-locating device	116	(2)	7
Rigal, Remigio. Magnetite deposits of Hierro Indio and other minor mines of the Department of San Rafael, Province of Mendoza (in Spanish)	116	(2)	7

Generated on 2024-09-19 14:39 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Rinehart Oil News Co. of Oklahoma. Rinehart's yearbook 1944	118	(9)	7612
Ritzmann, O. F. Patents vested in the Alien Property Custodian	19	(8)	7743
Riznichenko, G. V. Seismic properties of ground layers permanently frozen (in Russian)	118	(3)	7551
Roach, C. B. Subsurface study of Jennings field, Acadia Parish, La.	116	(4)	7308
Roberts, John. Earthquakes reveal oil fields	119	(3)	7692
Romberg, Frederick. Correlation of gravity observations with the geology of the Smoothingiron granite mass, Llano County, Tex.	118	(1)	7515
Rooney, W. J. Summary of earth-current records from Tucson, Ariz., for a complete sunspot cycle	119	(2)	7668
Roper, E. E. Well logging, U. S. Patent 2,346,789	118	(10)	7642
Rosaire, E. E. Reflection seismograph performance along the Gulf coast	117	(3)	7416
Rose, N. A. Exploratory water-well drilling in the Houston district, Texas	119	(4)	7710
Rougerie, Paul. On the distribution and the secular variation of terrestrial magnetization (in French)	118	(2)	7530
Rowe, R. C. Finding a hidden ore body	118	(8)	7599
Ruby, G. M. Petroleum exploration in Chile	118	(3)	7552
Rudashevskii, G. E. Considerations regarding the practical utilization of induction voltmeters (in Russian)	118	(3)	7553
Rupnik, J. J. Least-squares determination of the velocity function $V = V_o + kz$ for any set of time-depth data	116	(3)	7293
Russell, W. L. The total gamma-ray activity of sedimentary rocks as indicated by Geiger-counter determinations	118	(5)	7575
Rust, W. M. Nautral potential in well logging	116	(5)	7315

S

Sanderson, R. T. Geochemical prospecting, U. S. Patent 2,339,651	117	(10)	7499
---- Geochemical prospecting, U. S. Patent 2,345,219.	118	(10)	7632
Sawson, W. A. Application of radioactivity logging to special drilling problems	119	(5)	7719
---- Geophysics - vanguard of South America's future oil production	119	(8)	7744
Scheffer, V. On the application of the gravimeter to mountainous terrain (in Italian)	119	(1)	7656
Scherbatskoy, S. A. Automatic volume control, U. S. Patent 2,329,558	116	(10)	7361
---- Well-logging instrument, U. S. Patent 2,349,225.	119	(10)	7778

402

Generated on 2024-09-19 14:46 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No
Schlumberger, Marcel. Method and device for referring a level in a borehole to the bottom of said borehole, U. S. Patent 2,332,348	116	(10)	73
----- Coring tool, U. S. Application A.P.C. 271,524	119	(10)	77
----- Gun perforator, U. S. Application A.P.C. 315,157.	119	(10)	77
----- Cartridges, U. S. Application A.P.C. 403,648	119	(10)	77
----- Gun-firing apparatus, U. S. Application A.P.C. 403,649	119	(10)	77
----- Well-casing perforator, U. S. Application A.P.C. 403,650	119	(10)	77
Scholte, J. G. On surface waves in a stratified medium.	119	(3)	76
Schuchert, Charles. Stratigraphy of the eastern and central United States	116	(9)	73
Schumacher, Martin. Device for regulating the sensitivity of signal-receiving apparatus, U. S. Patent 2,329,570	116	(10)	73
Schwartz, G. M. Tracing the Duluth gabbro contact with a magnetometer	118	(2)	75
Science New Letter. Earthquake waves clocked	116	(3)	73
----- Mexican seismograph	117	(3)	74
Scott, W. E. List of geomagnetic observatories and thesaurus of values, III	117	(2)	73
----- List of geomagnetic observatories and thesaurus of values, IV-V	118	(2)	75
Seaborg, G. T. Table of isotopes	118	(5)	75
Seismograph Service Corporation. Well-logging laboratory	118	(7)	75
Seismological Society of America, Eastern Section. Earthquake Notes	118	(3)	75
Seismos Gesellschaft. Report on gravity measurements in the survey district of Varna, Bulgaria (in German).	118	(1)	75
Selsky, V. A. The structure of the earth's crust according to the data of applied geophysics (in Russian)	117	(8)	74
Sharpe, J. A. The effect of charge size on reflection records	118	(3)	75
Shepherd, G. F. Use of gamma-ray logs in measurement problems	119	(5)	7
Sheppard, C. W. Radioactivity and petroleum genesis	118	(5)	7
Shneerson, B. L. The gravitational anomalies in the Ishimbaev district (in Russian)	117	(1)	7
Shneiderov, A. J. The exponential law of gravitation and its effects on seismological and tectonic phenomena: A preliminary exposition	118	(1)	7
Shnirman, G. L. A condensor seismograph for prospecting by the method of refracted waves (in Russian)	118	(3)	7
----- An electromagnetic seismograph of high sensitivity (in Russian)	119	(3)	7

Generated on 2024-09-19 14:40 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Shook, E. M. Method for seismic surveying, U. S. Patent 2,340,275	117	(10)	7501
Short, E. H., Jr. Use of gamma-ray curves increases possibilities of successful work-over	117	(5)	7437
----- Distant offshore seismic survey conducted in Gulf of Mexico	118	(3)	7557
----- Electrical prospecting method used in Gulf coast search for new reserves	119	(4)	7711
Shugart, T. R. Frequency discrimination in the low-velocity zone	117	(3)	7418
Sidwell, Raymond. Aid of sedimentary petrology to the discovery of oil	118	(8)	7600
Silverman, Daniel. Differential radioactivity logging, U. S. Patent 2,332,873	116	(10)	7379
----- Method for determining the nature of formations encountered in well drilling, U. S. Patent 2,341,745	118	(10)	7620
Simpson, J. A., Jr. Four-Pi solid-angle G-M counters	119	(5)	7721
Sineritz, J. G. The geological interpretation of geo-physical measurements applied in prospecting (in Spanish)	116	(9)	7339
Singewald, J. T., Jr. Bibliography of economic geology of South America	117	(9)	7473
Sloat, John. How NOT to find an oil field	119	(3)	7695
Smith, G. A. Borehole logging apparatus, U. S. Patent 2,350,371	119	(10)	7784
Solaini, L. Apparatus for the photographic registration of pendulum measurements of gravity (in Italian)	119	(1)	7646
South African Mining and Engineering Journal. Magnetic methods in mining practice: Uses in prospecting and separation	118	(2)	7532
Spatz, W. D. B. The factors influencing the plateau characteristics of self-quenching Müller-Geiger counters	117	(5)	7438
Spencer, Lloyd. Firing head for gun perforators, U. S. Patent 2,328,309	116	(10)	7358
----- Gun perforator, U. S. Patent 2,331,057	118	(10)	7613
Starik, J. Critical survey of radioactive methods for the determination of geological age	117	(5)	7439
Stearn, N. H. Birth of the science of exploration geo-physics: 1944	118	(8)	7601
Sterrett, Elton. Radon emanations outline formations	119	(5)	7722
Stoddard, R. M. Blasting machine, U. S. Patent 2,326,696	116	(10)	7349
Stotz, C. C. Apparatus for seismic prospecting, U. S. Patent 2,336,198	117	(10)	7485
Strona, A. A. Results and problems of magnetometric study of the pre-Cambrian of the European part of the U.S.S.R. (in Russian)	118	(2)	7533

Generated on 2024-09-19 14:43 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
----- The magnetic anomalies of Massalsk-Sukhinichi and questions of the vertical structure of the mid-Russian highlands (in Russian)	119	(2)	766
Stuart, R. W. Method for determining the nature of formations encountered in well drilling, U. S. Patent 2,341,745	118	(10)	762
Stulken, E. J. Effect of ray curvature upon seismic interpretations	117	(3)	741
Subkow, Philip. Geometrical orientation of cores	118	(8)	760
Sukheswala, R. N. The age of the Rajmahal traps and some neighbouring dyke rocks by the "lead-ratio" method	118	(5)	757
Swainson, O. W. Magnetic work of the United States Coast and Geodetic Survey from April 1942 through March 1943	116	(2)	727
Swan, B. G. Index of wells shot for velocity	119	(3)	769
Swan, Merrill. Apparatus for seismic prospecting, U. S. Patent 2,330,216	116	(10)	736
Swift, Gilbert. Well-logging instrument, U. S. Patent 2,349,225	119	(10)	777

T

Tageeva, N. V. Fluorine and boron in natural waters and their bearing on the occurrence of petroleum	118	(7)	758
Taggart, M. S., Jr. Geochemical prospecting, U. S. Patent 2,330,758	116	(10)	737
----- Oil-prospecting method, U. S. Patent 2,349,472	119	(10)	778
Taylor, N. W. Aging thermometers	118	(6)	758
Terrestrial Magnetism and Atmospheric Electricity. Notes:			
Magnetic surveys in South and North America	117	(2)	740
Magnetic survey of American republics	118	(2)	752
Magnetic surveys in airplanes by the U.S.S.R.	119	(2)	767
Sever Institute of Geophysical Technology	119	(8)	774
Thayer, T. P. Geologic principles in the search for chromite ore	117	(1,2)	739
Theodorovich, G. I. Oil reservoirs of the Ishimbaevo-Sterlitamak region	117	(7)	744
----- Sulfur as a guide in prospecting for oil	117	(7)	744
Thyssen, S. von. Concerning the influence exerted on gravity measurements by the ground's inhomogeneity created by water content (in German)	119	(1)	763
Tikhonov, A. N. The effect of the inhomogeneity of the earth's crust on the field of terrestrial currents (in Russian)	117	(4)	743
Ting, S. L. A magnetometer for the determination of the vertical component of the earth's magnetic field	119	(2)	767
Tolkachev, M. The findings of electrical surveys in the district of Soligalich, province of Iaroslavl (in Russian)	118	(4)	753

Generated on 2024-09-19 14:40 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Tovchigrechko, S. S. An experiment in rapid determination of gravity (in Russian)	119	(1)	7648
Trappe, F. A seismic reflection survey of the flank zone of a north German salt dome (in German)	119	(3)	7697
Trask, P. D. Source beds of petroleum	116	(7)	7318
Tripp, R. M. Analytical and experimental data concerning a solid hydrocarbon survey of the Fort Collins anticline	119	(7)	7726
Turechek, G. F. Gun-perforating performances improved by new bullet design	116	(8)	7330
----- Gun perforator, U. S. Patent 2,328,308	116	(10)	7357
----- Firing head for gun perforators, U. S. Patent 2,328,309	116	(10)	7358
----- Determination of bullet velocity in gun perforators	117	(8)	7460
----- Method and apparatus for perforating well casing by gun fire, U. S. Patent 2,336,819	117	(10)	7489
Turner, E. E. Apparatus for echo-distance measurement, U. S. Patent 2,342,171	118	(10)	7621
U			
Ulrich, F. P. Progress report of seismological work by the United States Coast and Geodetic Survey in the western United States during 1942	116	(3)	7299
Uren, L. C. Recent developments in formation logging. Part 2	116	(8)	7331
V			
Vallely, J. L. Geophysical survey of the Arkansas bauxite region	119	(1,2)	7653
Van Orstrand, C. E. Flow of heat from an intrusive body into country rock	116	(6)	7316
Van Tuyl, F. M. Some significant developments in 1942 in petroleum geology and geophysics	116	(8)	7332
----- Review of petroleum geology in 1943	117	(9)	7474
----- Progress in petroleum exploration	119	(8)	7746
Vening-Meinesz, F. A. The equilibrium figure of the earth and the indirect isostatic or Bowie reduction	119	(1)	7658
Vestine, E. H. The geographic incidence of aurora and magnetic disturbance, Northern Hemisphere	118	(2)	7535
Vogt, K. Measurements of the spread of propagation over an inhomogeneous ground (in German)	119	(4)	7704

Generated on 2024-09-19 14:41 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
W			
Walton, M. S., Jr. Magnetic exploration of the Bohemia Basin nickel-copper deposits, southeastern Alaska.	117	(2)	740
Wank, F. J. The distribution of helium and radioactivity in rocks: VI. The Ayer granite-migmatite at Chelmsford, Mass.	119	(5)	771
Wantland, Dart. Magnetic interpretation	117	(2)	740
Warner, L. A. Iron deposits of Kasaan Peninsula, Prince of Wales Island, southeastern Alaska	119	(2)	767
Washburn, H. W. Seismic prospecting system, U. S. Patent 2,331,363	116	(10)	737
Way, H. J. R. Reef prospecting by the resistivity method in Uganda	118	(4)	756
Wayne Miller, Robert Du-. Electrical exploration apparatus, Canadian Patent 418,747	117	(10)	750
Weiss, Oscar. The causes of rock bursts	116	(3)	736
Wellenstein, Robert. Device for regulating the sensitivity of signal receiving apparatus, U. S. Patent 2,329,570	116	(10)	736
Weller, J. M. Outline of Chinese geology	119	(8)	774
Wells, F. G. Geologic principles in the search for chromite ore	117	(1,2)	739
West, S. S. The analysis of gases by scattering of electrons	116	(7)	752
West, T. S. Precise measurement of deep electrical anomalies	119	(4)	773
White, W. N. Exploratory water-well drilling in the Houston district, Texas	119	(4)	773
Wilcox, S. W. Sand and gravel prospecting by the earth resistivity method	117	(4)	74
Willis, Bailey. Philippine earthquakes and structure..	119	(3)	76
Willis, Floyd, Jr. Means for logging wells, U. S. Patent 2,331,152	116	(10)	73
Wilson, J. T. Ground-water exploration by earth-resistivity methods	119	(4)	77
Winterhalter, A. C. Seismographic prospecting, U. S. Patent 2,325,157	116	(10)	73
Wir, S. M. Geophysical exploration in Poland	118	(8)	76
Wolf, Alfred. The equation of motion of a geophone on the surface of an elastic earth	118	(3)	75
Woods, J. P. Seismograph amplitude control, U. S. Patent 2,336,206	117	(10)	74
Wyckoff, R. D. Geophysics looks forward	117	(8)	74
----- Apparatus for measuring magnetic fields, U. S. Patent 2,334,593	119	(10)	77

Generated on 2024-09-19 14:45 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from THE OHIO STATE UNIVERSITY

	Abs.	Class	No.
Z			
Zaikowsky, W. M. Well-logging method, U. S. Patent 2,346,203	118	(10)	7636
Zamorev, A. A. A study of the two-dimensial reversed problem of the theory of the potential (in Russian)	116	(1)	7266
----- Determination of the form of a body by the derivatives of the external gravitational potential (in Russian)	118	(1)	7518
Zanon, F. S. Microseisms produced by shocks (in Italian)	119	(3)	7699
ZoBell, C. E. Influence of bacterial activity on petroleum deposits and products	119	(7)	7727
Zschokke, A. J. Gun perforator, U. S. Patent 2,326,114.	116	(10)	7346
Zuschlag, Theodor. Geoelectric and seismic apparatus, Canadian Patent 418,420	117	(10)	7503
Zwerger, Rudolf von. Concerning further experiences with radioactivity measurements in boreholes (in German)	118	(5)	7578
----- Geophysical exploration for oil in the European part of the Soviet Union (in German)	118	(8)	7584

Generated on 2024-09-19 14:41 GMT / https://hdl.handle.net/2027/osu.32435030643886
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
THE OHIO STATE UNIVERSITY